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MORBIDITY AND MORTALITY WEEKLY REPORT



## Improper Use of Child Safety Seats — Kentucky, 1996

Since enactment of the Kentucky child restraint law in 1982, the number of motor-vehicle–occupant deaths among children aged 0–4 years has decreased 37% (*1*). A substantial proportion of this decline is attributed to the increased use of child safety seats (CSSs); in 1995, use of CSSs in Kentucky was 72% (*2*). In 1996 in the United States, although approximately 85% of infants and 60% of children aged 0–4 years were restrained, approximately 80% of CSSs were used improperly (*3*). The effectiveness of CSSs in preventing death and injury is reduced when they are used incorrectly (*4,5*). To estimate the rate for improper use of CSSs, the Kentucky Injury Prevention and Research Center analyzed data from observations and inspections of vehicles entering the main community shopping center parking lot during 1 day in each of two rural counties. This report summarizes the results of this study, which indicate that most children in CSSs were restrained improperly.

In both counties, an inspection area was set up within the parking lot, and two observers were placed at the entrance; other entrances were closed by traffic safety cones. Observers completed a survey form for each vehicle containing an occupant appearing to be aged ≤4 years, and every other vehicle with an occupant appearing to be aged ≤4 years was asked to participate in the interview/inspection process. When a driver agreed to participate, a consent form was signed and one researcher interviewed the driver and a second inspected the CSS. Interviews consisted of 16 questions related to the driver, the CSS, and the reason for the trip. Inspections addressed the type of CSS, position(s) of child(ren) in the vehicle, type of vehicle, and whether the CSS was used properly.

A total of 232 motor vehicles with an occupant aged ≤4 years were observed at the two sites. Of the 116 vehicles that were eligible for interview/inspection, 77 (66%) drivers agreed to participate. There were 87 child occupants in the 77 vehicles; 62 (81%) of the drivers were female, and 54 (70%) of the drivers were mothers of the children.

Of the 87 children, 69 (79%) were restrained, and 17 (20%) were restrained properly; 14 (16%) of the children were unrestrained. The restraint status of the remaining four children was undetermined because they were unrestrained at the time of inspection; although the adult occupants reported the children had been restrained before the inspection and interview, these four were not included in the analysis. A total of 73 instances of improper use were observed among the 52 improperly restrained children. A substantially greater percentage of these errors occurred with the use of convertible

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CSSs (e.g., a seat that can be used for both infants and toddlers; backward facing for infants aged <12 months and weighing <20 lbs, and forward facing for children aged ≥12 months and weighing 20–40 lbs). Within this category, 22 (42%) errors involved the harness, and 19 (37%) involved misuse of the harness retainer (chest) clip (Figure 1).

Of the 42 drivers who had improperly restrained children as occupants, 28 (67%) reported having learned how to use the device by reading the accompanying instructions. Nine (21%) reported having learned through the process of trial and error, and five (12%) reported having learned through demonstration.

The 83 children with known restraint status were distributed into three age categories: aged ≤12 months (n=19), aged 13–24 months (n=29), and aged >24 months (n=36). For three (4%) children, ages were not recorded on the interview form. Children aged ≤12 months had the lowest percentage (15%) of improper use (referent group). Compared with children aged ≤12 months, those aged 13–24 months were four times more likely to be restrained improperly (odds ratio=4.0, p=0.06). Among children aged 13–24 months, 90% were restrained improperly, followed by children aged >24 months (69%) and children aged ≤12 months (68%).

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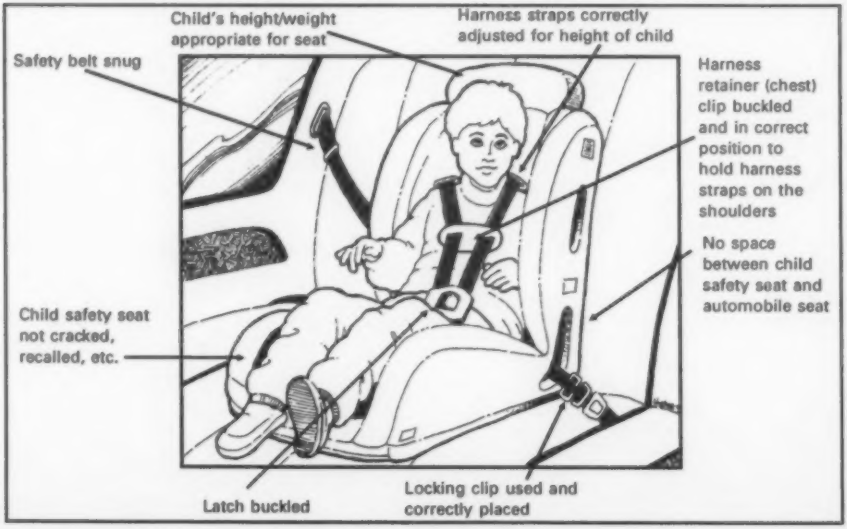
**Editorial Note:** The findings in this report indicate that although most children were restrained in a CSS, three fourths were restrained improperly. Previous studies have documented similar proportions of improper restraint (*5,6*). Concern about the proper use of CSSs was prompted by the relation between CSS use and air bag-related injuries to children (*7*).

**FIGURE 1. Factors considered in inspection of child safety seats — Kentucky, 1996**



*Child Safety Seats — Continued*

Children aged 13–24 months who used convertible CSSs were most likely to be restrained improperly. Infant CSSs may be easier to use correctly than are convertible CSSs. In addition, more instruction may be available for infant seats than for convertible CSSs. A previous study documented a 46% decrease in misuse of CSSs when personal instruction was given (*8*).

Because children aged 13–24 months are no longer passive infants and may protest vigorously about being restrained, the risk for CSS errors or the lack of restraint may be increased. As a result, caregivers must be firm in their resolve to have children restrained properly. Because the developmental characteristics of children cannot be changed, prevention efforts must focus on changing the behavior of caregivers.

The findings in this report are subject to at least two limitations. First, only 66% of eligible drivers participated in the survey; therefore, the findings may not be representative of all child restraint use. Second, eligibility was determined by the physical appearance of the child. As a result, some children may have been missed who appeared to be aged >4 years.

At least five strategies exist for increasing the proper use of CSSs. First, encouraging proper use of CSSs should combine health education and law enforcement (*9*). For example, law enforcement officers could issue citations for improper use, but fines could be waived if the caregiver attended an educational class on proper use and then demonstrated the capability of using the device properly. Second, at the 12-month well-child examination, health-care providers could assess the child for weight and ability to make the transition from an infant CSS to a convertible CSS, or to use the convertible seat in the position for an older child. The caregiver could bring the CSS and vehicle most frequently used to the examination site, and the health-care provider could explain and demonstrate proper use. Third, targeted educational strategies are needed for groups at highest risk. This will require better documentation of the characteristics of the misuse and resulting injuries to child passengers. Fourth, local health departments and others could offer training in the proper use of CSSs at areas frequented by toddlers and their caregivers (e.g., fast-food restaurants, day care centers, and church-affiliated child-care programs). Finally, improved engineering could make CSSs easier to use. In addition, efforts to improve automobiles so that rear seats are equipped with universal attachments for CSSs should continue (*10*).

All 50 states have legislation that mandates restraint use for children aged <4 years. The adoption of this legislation has been associated with declines in motor-vehicle–related deaths among children in this age group. To continue this decline, prevention efforts now must focus on the proper use of these CSSs to maximize their life-saving potential.

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## Imported Dengue — United States, 1996

Dengue is a mosquito-transmitted acute disease caused by any of four dengue virus serotypes (DEN-1, DEN-2, DEN-3, and DEN-4) and characterized by the sudden onset of fever, headache, myalgia, arthralgia, rash, nausea, and vomiting. This disease is endemic in most tropical areas of the world and has occurred in U.S. residents returning from travel to such areas. CDC maintains a laboratory-based passive surveillance system for imported dengue among U.S. residents. This report summarizes information about cases of imported dengue among U.S. residents for 1996, which indicated that most persons for whom travel history was known probably acquired infection in the Caribbean islands or Asia.

Serum samples from 179 persons who had suspected dengue with onset of symptoms in 1996 were submitted to CDC for diagnostic testing from 32 states and the District of Columbia. From these samples, 43 (24%) cases from 18 states and the District of Columbia were diagnosed serologically as dengue (single high titers of IgG in acute serum samples or by IgM detection in early convalescent samples) or by isolation of dengue virus. A diagnosis of dengue infection was negative in 102 (57%) patients and could not be determined in 34 (19%) patients because of unavailability of convalescent samples for serologic testing (*1*).

Of the 43 persons with laboratory-diagnosed dengue, sex was known in 39; 22 (56%) were male. Age was reported for 30 persons and ranged from 5 to 69 years (median: 33 years). The virus serotype (DEN-1 and DEN-2) was identified for five cases (Table 1). Travel histories, available for 37 persons, indicated that infections probably were acquired in the Caribbean islands (19 cases), Asia (11), Africa (three), the Pacific islands (two), Central America (one), and South America (one).

Clinical information was available for 28 patients with laboratory-diagnosed dengue. The most commonly reported symptoms were consistent with classic dengue fever (e.g., fever [93%], headache [61%], myalgia [57%], rash [57%], and arthralgia [18%]). Less frequently reported manifestations included diarrhea (five); eye pain (four); skin hemorrhages (two); and jaundice and depression (one each); low platelet counts (61,000–127,000/$mm^3$, average 98,000/$mm^3$ [normal: 150,000–450,000/$mm^3$])

*Imported Dengue — Continued*

(eight); low white blood cell count (1900–3100/$mm^3$, average 2550/$mm^3$ [normal: 3200–9800/$mm^3$]) (six); and elevated liver enzymes (one). At least two patients were hospitalized, and no deaths were reported.

*Reported by: State and territorial health depts. Dengue Br, Div of Vector-Borne Infectious Diseases, National Center for Infectious Diseases, CDC.*

**TABLE 1. Suspected and laboratory-diagnosed cases of imported dengue, by state — United States, 1996**

| State | Cases | | Travel history, if known, of persons with laboratory-diagnosed dengue (serotype, if known) |
|---|---|---|---|
| | Suspected | Laboratory-diagnosed | |
| Alabama | 4 | 0 | |
| Alaska | 1 | 0 | |
| Arkansas | 1 | 0 | |
| California | 10 | 0 | |
| Colorado | 8 | 2 | India (DEN-2), Malaysia |
| District of Columbia | 5 | 1 | Ivory Coast |
| Florida | 5 | 1 | Trinidad |
| Georgia | 11 | 1 | Grenadine Islands |
| Hawaii | 6 | 2 | Samoa (two cases) |
| Illinois | 6 | 0 | |
| Indiana | 1 | 0 | |
| Maine | 1 | 1 | U.S. Virgin Islands (DEN-1) |
| Maryland | 9 | 6 | U.S. Virgin Islands, British Virgin Islands (five cases) |
| Massachusetts | 20 | 7 | U.S. and British Virgin Islands and Puerto Rico, U.S. Virgin Islands, Malaysia, India (two cases) |
| Michigan | 3 | 0 | |
| Minnesota | 3 | 0 | |
| Montana | 1 | 0 | |
| Nebraska | 1 | 0 | |
| New Hampshire | 1 | 0 | |
| New Jersey | 3 | 1 | India |
| New Mexico | 4 | 0 | |
| New York | 18 | 6 | Jamaica, U.S. and British Virgin Islands, Anguilla, India (DEN-2), Trinidad and Tobago |
| North Carolina | 4 | 2 | India, Senegal |
| Ohio | 1 | 1 | Philippines |
| Oregon | 8 | 1 | Burma and Thailand |
| Pennsylvania | 7 | 3 | Puerto Rico and British Virgin Islands, British Virgin Islands (two cases) |
| Rhode Island | 3 | 3 | (DEN-1, two cases) |
| South Carolina | 2 | 0 | |
| Texas | 23 | 2 | Honduras, Nigeria |
| Vermont | 2 | 1 | Barbados |
| Virginia | 1 | 0 | |
| Washington | 2 | 1 | Southeast Asia |
| Wisconsin | 4 | 1 | Ecuador |
| **Total** | **179** | **43** | |

*Imported Dengue — Continued*

**Editorial Note:** Dengue is transmitted by the mosquito *Aedes aegypti*, which is present in most tropical urban areas of the world. In the United States, the mosquito can be found during the summer in southeastern states, including parts of Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Texas. Dengue transmission in the United States is rare; however, autochthonous transmission of dengue was documented in Texas in 1980, 1986, and 1995 (*2*).

The incubation period of dengue is 4–7 days (range: 3–14 days). Most cases are characterized by mild manifestations, but infections in some persons can result in the more severe forms of the disease. Dengue hemorrhagic fever (DHF) is characterized by fever, low platelet count (≤100,000/mm$^3$), hemorrhagic manifestations, and evidence of increased vascular permeability (e.g., hemoconcentration [hematocrit increased by ≥20% from baseline], pleural or abdominal effusions, or hypoalbuminemia). Dengue shock syndrome (DSS) is DHF plus narrow pulse pressure (≤20 mm Hg), hypotension, or shock (*3*). The fatality rate for patients with DSS can be as high as 44% (*4*).

During 1987–1993, the average annual number of laboratory-diagnosed cases reported to CDC was 20, but in 1994 the number increased to 38 (*1*). In 1995, an unusually high number (n=86) of imported laboratory-diagnosed cases of dengue was identified by CDC, reflecting the occurrence of outbreaks in Central American and Caribbean countries and the high number of cases detected by an active surveillance system in Texas (*5,6*). In 1996, the number of dengue and DHF cases reported to the Pan American Health Organization (n=276,758) was lower than the total for 1995 (n=316,187). Among persons in the United States with imported cases in 1996, five persons with history of travel to India reflect the DEN-2 epidemic that occurred in India (*7*). Among the imported infections acquired in the Caribbean islands during 1996, seven were diagnosed in persons from Maryland and Pennsylvania who traveled to the Caribbean during January (*8*).

The number of cases in this report represents a minimum estimate of the number of U.S. travelers with dengue. Because dengue is not a notifiable disease nationally or in most states, diagnostic samples may not be sent for testing or they may be sent to laboratories other than CDC; therefore, many imported cases may not be counted. To provide a better estimate of the total number of cases, state epidemiologists were asked to provide a listing of all dengue cases reported in their state with onset of illness in 1996. Nineteen states reported 51 cases; 22 (43%) cases had not been reported previously.

There is no vaccine for preventing dengue, and persons traveling to areas where dengue is endemic should avoid exposure to mosquito bites by using mosquito repellents and protective clothing and remaining in well screened or air conditioned areas. *Ae. aegypti* is an urban mosquito usually found in or near human dwellings. In domestic settings, the mosquito can be found resting in dark areas including closets, bathrooms, behind curtains, and under beds. The species bites usually during the early morning and late afternoon (*9*). The risk for exposure is higher in urban residential areas, but may be lower for tourists in some settings (e.g., beaches, hotels with well-kept grounds, and areas away from human habitation).

The incidence and geographic distribution of dengue have increased greatly in recent years, and health-care providers should consider dengue in the differential

*Imported Dengue — Continued*

diagnosis of illness in all patients who have fever and a history of travel to tropical areas within 2 weeks of onset of symptoms. Because of the anticoagulant properties of acetylsalicylic acid (i.e., aspirin) and other nonsteroidal anti-inflammatory agents, only acetaminophen products are recommended for the management of pain and fever. For diagnosis, acute- and convalescent-phase serum samples should be obtained and sent through state or territorial health departments to CDC's Dengue Branch, Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases, 2 Calle Casia, San Juan, PR 00921-3200; telephone (787) 766-5181; fax (787) 766-6596. Serum samples should be accompanied by a summary of clinical and epidemiologic information, including date of onset of disease, date of collection of sample, and a detailed recent travel history.

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## National, State, and Urban Area Vaccination Coverage Levels Among Children Aged 19–35 Months — United States, 1997

CDC's National Immunization Survey (NIS) provides ongoing national estimates of vaccination coverage among children aged 19–35 months, based on the data for the most recent 12 months, for each of the 50 states and for 28 selected urban areas (*1*). The NIS was implemented in April 1994 to monitor vaccination coverage levels as part of the Childhood Immunization Initiative (CII), a national strategy to ensure high vaccination coverage of children during the first 2 years of life (*2*). This report presents the findings of the 1997 NIS*, which indicate that vaccination coverage among U.S. children aged 19–35 months remains at the highest levels ever, but that some new vaccines or recommended vaccine doses are below 90% coverage levels.

NIS uses a quarterly random-digit–dialing sample of telephone numbers for each survey area to collect vaccination information for all age-eligible children. During 1997, a total of 32,433 household interviews were completed, representing 32,742 children (mean: 420 children per survey area). The overall response rate for households

*For this reporting period (January–December 1997), NIS included children born during February 1994–May 1996 (median age: 27 months).

*Vaccination Coverage Levels — Continued*

with children aged 19–35 months for all 78 survey areas was 69% (range: 56%–89%). For completeness and verification, vaccination data are requested from vaccination providers with consent of parents. Provider data are weighted to represent the entire group of children surveyed and to account for household nonresponse, natality data, and the lower vaccination coverage among children in households without telephones (*1,3*). The demographic characteristics and reported vaccination histories were similar for children with and without provider information.

Compared with 1996, national vaccination coverage during 1997 increased slightly for three or more doses of *Haemophilus influenzae* type b vaccine (Hib3) (from 92% to 93%) and for three or more doses of hepatitis B vaccine (HepB3) (from 82% to 84%) (Table 1). Coverage with varicella vaccine (VAR) increased from 16% in 1996 to 26% in 1997. During 1997, VAR coverage increased from 18% in the first quarter to 33% in the last quarter. As in 1996, coverage with three or more doses of diphtheria and tetanus toxoids and pertussis vaccine/diphtheria and tetanus toxoids (DTP3), three or more doses of poliovirus vaccine (Polio3), one or more doses of measles-containing vaccine

**TABLE 1. Vaccination coverage levels among children aged 19–35 months, by selected vaccines — United States, National Immunizaton Survey, 1994–1997**

| | April–December 1994* | | January–December 1995† | | January–December 1996§ | | January–December 1997¶ | |
|---|---|---|---|---|---|---|---|---|
| **Vaccine/Dose** | **%** | **(95% CI**)** | **%** | **(95% CI)** | **%** | **(95% CI)** | **%** | **(95% CI)** |
| **DTP/DT††** | | | | | | | | |
| ≥3 Doses | 94 | (±0.6) | 95 | (±0.6) | 95 | (±0.4) | 95 | (±0.4) |
| ≥4 Doses | 76 | (±1.1) | 79 | (±1.0) | 81 | (±0.7) | 81 | (±0.7) |
| **Poliovirus** | | | | | | | | |
| ≥3 Doses | 83 | (±1.0) | 88 | (±0.8) | 91 | (±0.5) | 91 | (±0.5) |
| **Hib§§** | | | | | | | | |
| ≥3 Doses | 86 | (±0.8) | 92 | (±0.6) | 92 | (±0.5) | 93 | (±0.5) |
| **MCV¶¶** | | | | | | | | |
| ≥1 Doses | 89 | (±0.8) | 90 | (±0.7) | 91 | (±0.5) | 91 | (±0.5) |
| **Hepatitis B** | | | | | | | | |
| ≥3 Doses | 37 | (±1.2) | 68 | (±1.0) | 82 | (±0.7) | 84 | (±0.6) |
| **Varicella** | | | | | | | | |
| ≥1 Doses | NA*** | | NA | | 16 | (±0.7)††† | 26 | (±0.7) |
| **Combined series** | | | | | | | | |
| 4 DTP/3 Polio/1 MCV§§§ | 74 | (±1.1) | 76 | (±1.0) | 78 | (±0.8) | 78 | (±0.7) |
| 4 DTP/3 Polio/1 MCV/3 Hib¶¶¶ | 69 | (±1.2) | 74 | (±1.0) | 77 | (±0.8) | 76 | (±0.8) |

* Children in this survey period were born during May 1991–May 1993.
† Children in this survey period were born during February 1992–May 1994.
§ Children in this survey period were born during February 1993–May 1995.
¶ Children in this survey period were born during February 1994–May 1996.
** Confidence interval.
†† Diphtheria and tetanus toxoids and pertussis vaccine/diphtheria and tetanus toxoids (DTP/DT).
§§ *Haemophilus influenzae* type b (Hib) vaccine.
¶¶ Includes any measles-containing vaccine (MCV).
*** Data not available in this reporting period. Data collection for varicella vaccine began in July 1996.
††† Estimate based on data collected during July–December 1996 for children born during August 1993–May 1995.
§§§ Four or more doses of DTP/DT, three or more doses of poliovirus vaccine, and one or more doses of MCV.
¶¶¶ Four or more doses of DTP/DT, three or more doses of poliovirus vaccine, one or more doses of MCV, and three or more doses of Hib.

*Vaccination Coverage Levels — Continued*

(MCV), and Hib3 exceeded 90% in 1997; coverage with four or more doses of DTP (DTP4) remained at 81%.

For the 4:3:1[†] and 4:3:1:3[§] series, national coverage remained stable (78% and 76%, respectively). The range of state-specific coverage for the 4:3:1 series narrowed from 64% to 88% (median: 79%) in 1996 to 71% to 87% (median: 78%) in 1997 (Table 2). For selected urban areas, coverage for the 4:3:1 series ranged from 63% to 84% (median: 79%) in 1996 to 66% to 88% (median: 76%) in 1997. Although the median coverge levels remained stable, the low end of the ranges increased.

Coverage levels for Polio3, MCV, and Hib3 ranged from 84% to 97% among states and from 81% to 96% among urban areas (Table 3). For DTP4, coverage ranged from 75% to 91% among states and 69% to 91% among urban areas. For HepB3, coverage ranged from 73% to 91% among states and 76% to 90% among urban areas.

During 1997, all states and 27 of the 28 selected urban areas achieved 90% coverage with DTP3. Four states and one urban area achieved 90% coverage with DTP4, and eight of the 46 remaining states and two of the 27 remaining urban areas had coverage levels of 85% to 89% (Table 3).

Compared with 1996, 90% coverage with Polio3 during 1997 increased from 38 to 41 states and decreased from 17 to 12 urban areas; all remaining states and 12 of the remaining 16 urban areas had coverage of 85% to 89% (*1*). For MCV, 90% coverage decreased from 32 to 31 states and from 19 to 17 urban areas; 18 of the 19 remaining states and nine of the 11 remaining urban areas had coverage of 85% to 89%. For Hib3, 90% coverage increased from 41 to 48 states and from 19 to 20 urban areas; all remaining states and six of the remaining eight urban areas had coverage levels of 85% to 89%. In 1997, two states and one urban area achieved 90% coverage for HepB3; 17 of the remaining 48 states and seven of the remaining 27 urban areas had HepB3 coverage levels of 85% to 89%. Compared with July 1996–June 1997, the median VAR coverage during 1997 increased from 17% (range: 3%–33%) to 23% (range: 4%–40%) among states and from 16% (range: 7%–33%) to 26% (range: 13%–43%) among urban areas (Table 3). Compared with 1996, the number that reached or exceeded 90% coverage goals (70% for HepB3) in 1997 remained unchanged at 30 states and decreased from 14 to 10 urban areas (*1*).

*Reported by: National Center for Health Statistics; Assessment Br, Data Management Div, National Immunization Program, CDC.*

**Editorial Note:** The findings in this report indicate that national coverage for the recommended vaccines remained the highest ever recorded, with four of the antigens at >90% coverage levels. This accomplishment reflects improvements in the vaccination delivery system since the low coverage levels reported during the 1989–1991 measles epidemic. The findings also suggest that several challenges remain: coverage levels for DTP4 have not changed since 1996, HepB3 coverage increased only slightly in 1997, and VAR coverage levels are increasing but remain at relatively low levels.

The low coverage levels with DTP4 may reflect in part the difficulty of getting children to return to providers in the second year of life when receipt of DTP4 is recommended. Reminding parents or recalling children that are overdue by using reminder

[†]Four or more doses of diphtheria and tetanus toxoids and pertussis vaccine/diphtheria and tetanus toxoids (DTP/DT), three or more doses of poliovirus vaccine, and one or more doses of measles-containing vaccine (MCV).

[§]Four or more doses of DTP/DT, three or more doses of poliovirus vaccine, one or more doses of MCV, and three or more doses of *Haemophilus influenzae* type b vaccine.

*Vaccination Coverage Levels — Continued*

**TABLE 2. Estimated vaccination coverage with the 4:3:1 series* and 4:3:1:3 series† among children aged 19–35 months, by coverage level and state and selected urban area — United States, National Immunization Survey, 1997§**

| Coverage Level/ State/Urban area | Series 4:3:1 % | (95% CI¶) | Coverage Level/ State/Urban area | Series 4:3:1:3 % | (95% CI¶) |
|---|---|---|---|---|---|
| **≥85%** | | | **≥85%** | | |
| Alabama | 86 | (±3.2) | Alabama | 85 | (±3.2) |
| Jefferson Co. | 84 | (±4.2) | Jefferson Co. | 82 | (±4.3) |
| Connecticut | 87 | (±3.6) | Connecticut | 85 | (±3.8) |
| Maine | 87 | (±3.4) | Massachusetts | 86 | (±3.1) |
| Massachusetts | 87 | (±2.9) | Boston | 86 | (±3.6) |
| Boston | 88 | (±3.4) | **75%–84%** | | |
| New Hampshire | 85 | (±3.8) | Alaska | 75 | (±4.8) |
| Vermont | 86 | (±3.1) | Arkansas | 77 | (±4.4) |
| **75%–84%** | | | Delaware | 79 | (±4.8) |
| Alaska | 77 | (±4.7) | Florida | 77 | (±3.6) |
| Arkansas | 77 | (±4.4) | Dade Co. | 75 | (±5.0) |
| California | 76 | (±3.0) | Duval Co. | 70 | (±5.1) |
| Los Angeles Co. | 73 | (±5.5) | Georgia | 79 | (±3.6) |
| San Diego Co. | 80 | (±4.3) | Fulton/DeKalb cos. | 75 | (±4.9) |
| Santa Clara Co. | 75 | (±4.7) | Hawaii | 79 | (±4.7) |
| Delaware | 81 | (±4.6) | Iowa | 76 | (±4.3) |
| District of Columbia | 76 | (±5.3) | Kansas | 82 | (±3.8) |
| Florida | 79 | (±3.5) | Kentucky | 79 | (±4.4) |
| Dade Co. | 77 | (±4.9) | Louisiana | 76 | (±4.1) |
| Duval Co. | 71 | (±5.1) | Orleans Parish | 69 | (±6.0) |
| Georgia | 81 | (±3.6) | Maine | 84 | (±3.6) |
| Fulton/DeKalb cos. | 78 | (±4.7) | Maryland | 80 | (±3.6) |
| Hawaii | 81 | (±4.6) | Baltimore | 83 | (±4.7) |
| Illinois | 76 | (±3.7) | Michigan | 75 | (±3.7) |
| Chicago | 71 | (±5.3) | Detroit | 65 | (±5.6) |
| Iowa | 76 | (±4.3) | Minnesota | 78 | (±4.4) |
| Kansas | 82 | (±3.8) | Mississippi | 80 | (±4.4) |
| Kentucky | 81 | (±4.3) | Missouri | 77 | (±4.4) |
| Louisiana | 77 | (±4.1) | Nebraska | 75 | (±4.3) |
| Orleans Parish | 71 | (±5.9) | New Hampshire | 84 | (±3.8) |
| Maryland | 82 | (±3.5) | New Jersey | 76 | (±4.2) |
| Baltimore | 85 | (±4.5) | Newark | 66 | (±6.3) |
| Michigan | 77 | (±3.6) | New Mexico | 75 | (±4.8) |
| Detroit | 70 | (±5.4) | New York | 76 | (±3.5) |
| Minnesota | 81 | (±4.2) | New York City | 75 | (±5.1) |
| Mississippi | 81 | (±4.4) | North Carolina | 80 | (±4.2) |
| Missouri | 78 | (±4.4) | North Dakota | 82 | (±3.9) |
| Montana | 75 | (±4.3) | Pennsylvania | 80 | (±3.7) |
| Nebraska | 77 | (±4.2) | Philadelphia Co. | 78 | (±5.1) |
| New Jersey | 78 | (±4.1) | Rhode Island | 81 | (±4.1) |
| Newark | 70 | (±6.1) | South Carolina | 79 | (±4.2) |
| New Mexico | 77 | (±4.6) | South Dakota | 76 | (±4.3) |
| New York | 79 | (±3.3) | Tennessee | 77 | (±3.1) |
| New York City | 79 | (±4.8) | Davidson Co. | 77 | (±4.6) |
| North Carolina | 81 | (±4.2) | Shelby Co. | 70 | (±5.3) |
| North Dakota | 83 | (±3.8) | Vermont | 84 | (±3.3) |
| Ohio | 75 | (±3.6) | Washington | 79 | (±3.2) |
| Franklin Co. | 75 | (±5.0) | King Co. | 77 | (±4.6) |
| Cuyahoga Co. | 74 | (±5.3) | West Virginia | 80 | (±4.1) |
| Pennsylvania | 82 | (±3.6) | Wisconsin | 79 | (±3.1) |
| Philadelphia Co. | 80 | (±4.9) | Milwaukee Co. | 70 | (±4.9) |
| Rhode Island | 84 | (±3.9) | **65%–74%** | | |
| South Carolina | 80 | (±4.2) | Arizona | 73 | (±3.4) |
| South Dakota | 78 | (±4.3) | Maricopa Co. | 72 | (±4.8) |

* Four or more doses of diphtheria and tetanus toxoids and pertussis vaccine/diphtheria and tetanus toxoids (DTP/DT), three or more doses of poliovirus vaccine, and one or more doses of measles-containing vaccine (MCV).

† Four or more doses of DTP/DT, three or more doses of poliovirus vaccine, one or more doses of MCV, and three or more doses of *Haemophilus influenzae* type b vaccine.

§ Children in this survey period were born during February 1994–May 1996.

¶ Confidence interval.

*Vaccination Coverage Levels — Continued*

**TABLE 2. Estimated vaccination coverage with the 4:3:1 series* and 4:3:1:3: series† among children aged 19–35 months, by coverage level and state and selected urban area — United States, National Immunization Survey, 1997§ — Continued**

| Coverage Level/ State/Urban area | Series 4:3:1 % | (95% CI¶) | Coverage Level/ State/Urban area | Series 4:3:1:3 % | (95% CI) |
|---|---|---|---|---|---|
| Tennessee | 78 | (±3.1) | California | 74 | (±3.1) |
| Davidson Co. | 77 | (±4.6) | Los Angeles Co. | 71 | (±5.5) |
| Shelby Co. | 73 | (±5.1) | San Diego Co. | 78 | (±4.3) |
| Texas | 75 | (±3.1) | Santa Clara Co. | 73 | (±4.8) |
| Bexar Co. | 81 | (±4.7) | Colorado | 72 | (±5.0) |
| Dallas Co. | 77 | (±5.2) | District of Columbia | 73 | (±5.4) |
| El Paso Co. | 67 | (±5.2) | Idaho | 70 | (±4.7) |
| Houston | 66 | (±6.1) | Illinois | 74 | (±3.8) |
| Washington | 80 | (±3.1) | Chicago | 68 | (±5.5) |
| King Co. | 79 | (±4.8) | Indiana | 72 | (±3.7) |
| West Virginia | 82 | (±4.0) | Marion Co. | 81 | (±4.5) |
| Wisconsin | 80 | (±3.0) | Montana | 74 | (±4.4) |
| Milwaukee Co. | 73 | (±4.8) | Nevada | 71 | (±4.9) |
| **65%–74%** | | | Ohio | 73 | (±3.6) |
| Arizona | 74 | (±3.4) | Cuyahoga Co. | 73 | (±5.3) |
| Maricopa Co. | 74 | (±4.7) | Franklin Co. | 74 | (±5.0) |
| Colorado | 74 | (±4.9) | Oklahoma | 71 | (±4.9) |
| Idaho | 72 | (±4.6) | Oregon | 72 | (±4.7) |
| Indiana | 74 | (±3.6) | Texas | 74 | (±3.1) |
| Marion Co. | 82 | (±4.4) | Bexar Co. | 79 | (±4.8) |
| Nevada | 73 | (±4.8) | Dallas Co. | 74 | (±5.4) |
| Oklahoma | 72 | (±4.9) | El Paso Co. | 65 | (±5.3) |
| Oregon | 73 | (±4.6) | Houston | 64 | (±6.1) |
| Utah | 71 | (±4.7) | Utah | 69 | (±4.7) |
| Virginia | 73 | (±4.7) | Virginia | 72 | (±4.8) |
| Wyoming | 74 | (±4.4) | Wyoming | 72 | (±4.4) |
| **Total** | **78** | **(±0.7)** | **Total** | **76** | **(±0.8)** |

* Four or more doses of diphtheria and tetanus toxoids and pertussis vaccine/diphtheria and tetanus toxoids (DTP/DT), three or more doses of poliovirus vaccine, and one or more doses of measles-containing vaccine (MCV).
† Four or more doses of DTP/DT, three or more doses of poliovirus vaccine, one or more doses of MCV, and three or more doses of *Haemophilus influenzae* type b vaccine.
§ Children in this survey period were born during February 1994–May 1996.
¶ Confidence interval.

and recall systems may further increase coverage with the fourth dose of DTP. Acellular-based DTP4 also can be administered to children as early as age 12 months if providers believe that the child is unlikely to return for a vaccination visit at age 15–18 months and if at least 6 months has elapsed since the third dose (*4*). Coverage with DTP4 is particularly low among children living below the poverty level (*5*). Conducting vaccine assessment and referral in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) is an effective strategy to address this gap in coverage (*6*).

Achieving high coverage with HepB3 vaccine since the 1991 ACIP recommendation for universal administration in infancy initially may have been hampered by provider resistance to vaccination of children at low immediate risk for disease (*7*) and the lack of adequate resources for vaccine purchase. During the mid-1990s, the federal government and several state governments enhanced the availability of HepB vaccine, and coverage with three or more doses increased from 37% in 1994 to 82% in 1996. Strategies that may further increase coverage with HepB3 include greater provider and parental education on the reasons for vaccination of infants, vaccination assessment and referral for needed vaccines at WIC sites (*6*), provider assessment

**TABLE 3. Estimated vaccination coverage with individual vaccines among children aged 19–35 months, by state and selected urban area — United States, National Immunization Survey, 1997***

| State/Urban area | ≥3 DTP/DT† | | ≥4 DTP/DT§ | | ≥3 Poliovirus¶ | | ≥1 MCV** | | ≥3 Hib†† | | ≥3 Hepatitis B | | ≥1 Varicella§§ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | % | (95%CI¶¶) | % | (95% CI) | % | (95% CI) | % | (95% CI) | % | (95% CI) | % | (95% CI) | % | (95% CI) |
| Alabama††† | 98 | (±1.2) | 89 | (±2.9) | 95 | (±1.8) | 92 | (±2.5) | 97 | (±1.5) | 86 | (±3.1) | 27 | (±3.5) |
| Jefferson Co.††† | 98 | (±1.8) | 87 | (±3.8) | 93 | (±2.9) | 93 | (±2.9) | 96 | (±2.2) | 89 | (±3.5) | 34 | (±5.3) |
| Alaska††† | 93 | (±2.9) | 80 | (±4.5) | 91 | (±3.2) | 87 | (±3.9) | 90 | (±3.5) | 87 | (±3.3) | 12 | (±3.3) |
| Arizona††† | 91 | (±2.3) | 79 | (±3.3) | 88 | (±2.7) | 88 | (±2.6) | 90 | (±2.4) | 79 | (±3.1) | 28 | (±3.4) |
| Maricopa Co.††† | 91 | (±3.2) | 79 | (±4.5) | 87 | (±3.8) | 89 | (±3.5) | 89 | (±3.4) | 79 | (±4.3) | 29 | (±4.8) |
| Arkansas††† | 95 | (±2.4) | 81 | (±4.1) | 91 | (±3.0) | 92 | (±2.8) | 93 | (±2.7) | 85 | (±3.3) | 16 | (±3.7) |
| California††† | 94 | (±1.8) | 79 | (±3.0) | 90 | (±2.2) | 89 | (±2.4) | 91 | (±2.2) | 83 | (±2.4) | 35 | (±2.9) |
| Los Angeles Co.††† | 93 | (±3.4) | 76 | (±5.4) | 89 | (±3.9) | 90 | (±3.7) | 91 | (±3.6) | 82 | (±4.6) | 40 | (±5.5) |
| Santa Clara Co.††† | 97 | (±2.0) | 83 | (±4.1) | 89 | (±3.6) | 91 | (±3.0) | 93 | (±2.8) | 87 | (±3.2) | 37 | (±5.1) |
| San Diego Co.††† | 96 | (±2.2) | 83 | (±4.1) | 91 | (±3.1) | 94 | (±2.4) | 93 | (±2.7) | 86 | (±3.4) | 33 | (±4.6) |
| Colorado††† | 94 | (±2.7) | 79 | (±4.6) | 88 | (±3.7) | 94 | (±2.7) | 91 | (±3.4) | 80 | (±4.4) | 20 | (±4.2) |
| Connecticut††† | 98 | (±1.3) | 91 | (±3.0) | 94 | (±2.6) | 94 | (±2.7) | 95 | (±2.2) | 84 | (±3.9) | 27 | (±4.6) |
| Delaware††† | 97 | (±1.9) | 84 | (±4.4) | 94 | (±2.8) | 91 | (±3.5) | 94 | (±2.8) | 83 | (±4.1) | 28 | (±4.8) |
| District of Columbia††† | 94 | (±3.0) | 80 | (±5.0) | 89 | (±3.9) | 91 | (±3.6) | 90 | (±3.8) | 79 | (±4.8) | 36 | (±5.6) |
| Florida††† | 96 | (±1.7) | 82 | (±3.3) | 91 | (±2.4) | 91 | (±2.4) | 93 | (±2.2) | 85 | (±3.0) | 27 | (±3.3) |
| Duval Co.††† | 95 | (±2.4) | 75 | (±4.8) | 90 | (±3.4) | 89 | (±3.6) | 93 | (±3.0) | 88 | (±3.2) | 34 | (±5.0) |
| Dade Co.††† | 96 | (±2.4) | 81 | (±4.6) | 89 | (±3.7) | 91 | (±3.4) | 93 | (±2.9) | 82 | (±4.3) | 23 | (±4.7) |
| Georgia††† | 98 | (±1.2) | 85 | (±3.3) | 94 | (±1.9) | 92 | (±2.5) | 95 | (±1.8) | 87 | (±2.9) | 25 | (±3.4) |
| Fulton/DeKalb cos.††† | 95 | (±2.5) | 84 | (±4.2) | 88 | (±3.8) | 93 | (±2.9) | 92 | (±3.2) | 83 | (±4.2) | 35 | (±5.3) |
| Hawaii††† | 94 | (±2.8) | 84 | (±4.3) | 90 | (±3.5) | 93 | (±3.0) | 92 | (±3.3) | 88 | (±3.4) | 34 | (±5.2) |
| Idaho††† | 92 | (±2.9) | 75 | (±4.6) | 89 | (±3.2) | 89 | (±3.4) | 88 | (±3.5) | 79 | (±4.1) | 6 | (±2.4) |
| Illinois††† | 95 | (±1.9) | 81 | (±3.4) | 89 | (±2.8) | 89 | (±2.7) | 92 | (±2.3) | 81 | (±3.2) | 20 | (±3.2) |
| Chicago††† | 94 | (±3.0) | 75 | (±5.2) | 88 | (±3.9) | 87 | (±4.0) | 89 | (±3.8) | 80 | (±4.7) | 17 | (±4.0) |
| Indiana††† | 95 | (±1.9) | 77 | (±3.5) | 89 | (±2.7) | 89 | (±2.7) | 91 | (±2.5) | 80 | (±3.1) | 16 | (±2.7) |
| Marion Co.††† | 96 | (±2.3) | 84 | (±4.3) | 92 | (±3.1) | 91 | (±3.4) | 93 | (±2.9) | 82 | (±4.4) | 20 | (±4.4) |
| Iowa††† | 96 | (±1.9) | 82 | (±3.9) | 91 | (±2.9) | 89 | (±3.3) | 95 | (±2.2) | 85 | (±3.3) | 18 | (±3.8) |
| Kansas††† | 96 | (±2.1) | 85 | (±3.6) | 93 | (±2.6) | 93 | (±2.5) | 94 | (±2.4) | 81 | (±4.3) | 25 | (±4.5) |
| Kentucky††† | 95 | (±2.3) | 83 | (±4.1) | 92 | (±2.9) | 90 | (±3.3) | 94 | (±2.6) | 83 | (±4.0) | 28 | (±4.6) |
| Louisiana††† | 96 | (±1.6) | 81 | (±3.8) | 92 | (±2.4) | 88 | (±3.2) | 94 | (±2.1) | 86 | (±3.1) | 16 | (±3.2) |
| Orleans Parish††† | 90 | (±4.1) | 75 | (±5.8) | 82 | (±5.2) | 86 | (±4.7) | 86 | (±4.7) | 77 | (±5.4) | 19 | (±5.0) |
| Maine††† | 98 | (±1.3) | 90 | (±3.0) | 95 | (±2.1) | 95 | (±2.2) | 96 | (±1.8) | 84 | (±3.4) | 13 | (±3.2) |
| Maryland††† | 97 | (±1.4) | 86 | (±3.2) | 93 | (±2.3) | 94 | (±2.0) | 95 | (±2.0) | 85 | (±3.1) | 40 | (±4.1) |
| Baltimore††† | 97 | (±2.2) | 89 | (±4.0) | 93 | (±3.1) | 94 | (±3.1) | 95 | (±2.7) | 83 | (±4.5) | 26 | (±5.3) |
| Massachusetts††† | 98 | (±1.2) | 91 | (±2.4) | 94 | (±2.0) | 95 | (±1.8) | 96 | (±1.8) | 88 | (±2.8) | 21 | (±3.3) |
| Boston††† | 98 | (±1.5) | 91 | (±3.0) | 96 | (±2.0) | 95 | (±2.3) | 96 | (±2.2) | 90 | (±2.9) | 20 | (±4.4) |
| Michigan††† | 95 | (±1.9) | 79 | (±3.5) | 91 | (±2.4) | 89 | (±2.8) | 91 | (±2.4) | 84 | (±2.8) | 17 | (±3.1) |
| Detroit††† | 90 | (±3.7) | 73 | (±5.3) | 82 | (±4.7) | 84 | (±4.4) | 82 | (±4.7) | 76 | (±4.9) | 15 | (±4.2) |
| Minnesota††† | 96 | (±2.0) | 84 | (±4.0) | 93 | (±2.5) | 92 | (±2.9) | 93 | (±2.7) | 77 | (±4.3) | 36 | (±4.7) |
| Mississippi††† | 95 | (±2.4) | 83 | (±4.2) | 92 | (±3.1) | 90 | (±3.4) | 94 | (±2.6) | 86 | (±3.7) | 11 | (±3.6) |
| Missouri††† | 97 | (±1.9) | 83 | (±4.1) | 90 | (±3.2) | 90 | (±3.3) | 95 | (±2.2) | 83 | (±3.8) | 25 | (±4.4) |
| Montana††† | 96 | (±2.2) | 80 | (±4.1) | 91 | (±3.0) | 87 | (±3.5) | 92 | (±2.8) | 80 | (±3.9) | 19 | (±3.6) |
| Nebraska††† | 95 | (±2.2) | 81 | (±4.0) | 90 | (±3.0) | 89 | (±3.3) | 92 | (±2.7) | 82 | (±3.6) | 22 | (±3.9) |

*Vaccination Coverage Levels — Continued*

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nevada††† | 93 | (±2.9) | 78 | (±4.6) | 90 | (±3.4) | 89 | (±3.6) | 91 | (±3.3) | 84 | (±3.5) | 13 | (±3.7) |
| New Hampshire*** | 99 | (±1.0) | 89 | (±3.3) | 95 | (±2.3) | 95 | (±2.3) | 97 | (±1.7) | 87 | (±3.2) | 27 | (±4.3) |
| New Jersey*** | 98 | (±1.3) | 82 | (±3.9) | 93 | (±2.6) | 93 | (±2.5) | 94 | (±2.2) | 91 | (±2.1) | 29 | (±4.3) |
| Newark††† | 92 | (±4.0) | 74 | (±6.0) | 81 | (±5.4) | 85 | (±4.9) | 84 | (±5.1) | 78 | (±5.4) | 15 | (±4.4) |
| New Mexico††† | 93 | (±3.0) | 81 | (±4.4) | 88 | (±3.8) | 87 | (±3.9) | 89 | (±3.6) | 82 | (±4.2) | 20 | (±4.1) |
| New York*** | 98 | (±1.2) | 83 | (±3.1) | 91 | (±2.3) | 94 | (±2.0) | 93 | (±2.2) | 86 | (±2.4) | 26 | (±3.3) |
| New York City*** | 97 | (±1.9) | 83 | (±4.5) | 92 | (±3.2) | 93 | (±2.9) | 92 | (±3.4) | 85 | (±3.6) | 22 | (±4.6) |
| North Carolina*** | 98 | (±1.3) | 84 | (±4.0) | 96 | (±2.0) | 94 | (±2.4) | 95 | (±2.2) | 90 | (±2.8) | 30 | (±4.8) |
| North Dakota*** | 98 | (±1.5) | 87 | (±3.4) | 93 | (±2.6) | 91 | (±3.0) | 96 | (±2.0) | 87 | (±3.0) | 24 | (±4.0) |
| Ohio††† | 97 | (±1.4) | 80 | (±3.4) | 90 | (±2.6) | 89 | (±2.7) | 95 | (±1.8) | 83 | (±2.9) | 23 | (±3.0) |
| Cuyahoga Co.*** | 95 | (±2.7) | 78 | (±5.1) | 90 | (±3.7) | 91 | (±3.5) | 93 | (±3.2) | 83 | (±4.3) | 26 | (±4.9) |
| Franklin Co.††† | 96 | (±2.4) | 79 | (±4.7) | 88 | (±3.8) | 90 | (±3.6) | 94 | (±2.8) | 78 | (±4.5) | 30 | (±5.0) |
| Oklahoma††† | 95 | (±2.5) | 77 | (±4.7) | 90 | (±3.3) | 88 | (±3.7) | 93 | (±2.8) | 83 | (±3.7) | 26 | (±4.4) |
| Oregon††† | 94 | (±2.5) | 78 | (±4.4) | 88 | (±3.4) | 88 | (±3.4) | 92 | (±2.9) | 83 | (±3.7) | 29 | (±4.5) |
| Pennsylvania*** | 96 | (±1.9) | 84 | (±3.5) | 90 | (±2.9) | 91 | (±2.7) | 93 | (±2.4) | 83 | (±3.3) | 39 | (±3.9) |
| Philadelphia Co.*** | 95 | (±2.8) | 82 | (±4.8) | 91 | (±3.5) | 92 | (±3.3) | 93 | (±3.2) | 81 | (±4.7) | 43 | (±5.9) |
| Rhode Island*** | 99 | (±0.6) | 89 | (±3.2) | 95 | (±2.3) | 95 | (±2.3) | 96 | (±2.0) | 87 | (±3.3) | 35 | (±4.8) |
| South Carolina*** | 96 | (±2.1) | 83 | (±4.0) | 91 | (±3.0) | 91 | (±3.2) | 95 | (±2.3) | 86 | (±3.4) | 26 | (±4.5) |
| South Dakota*** | 96 | (±1.9) | 81 | (±4.1) | 92 | (±2.8) | 91 | (±3.0) | 95 | (±2.2) | 79 | (±4.0) | 4 | (±1.9) |
| Tennessee*** | 96 | (±1.5) | 83 | (±2.9) | 91 | (±2.0) | 90 | (±2.3) | 94 | (±1.6) | 84 | (±2.5) | 22 | (±2.9) |
| Shelby Co.††† | 95 | (±2.6) | 79 | (±4.7) | 88 | (±3.8) | 89 | (±3.7) | 91 | (±3.5) | 84 | (±4.0) | 24 | (±4.6) |
| Davidson Co.††† | 95 | (±2.5) | 83 | (±4.1) | 89 | (±3.4) | 89 | (±3.5) | 93 | (±2.9) | 79 | (±4.1) | 30 | (±4.6) |
| Texas††† | 92 | (±2.1) | 78 | (±3.0) | 88 | (±2.4) | 89 | (±2.3) | 90 | (±2.2) | 82 | (±2.5) | 23 | (±2.5) |
| Bexar Co.*** | 95 | (±2.7) | 83 | (±4.5) | 94 | (±2.8) | 91 | (±3.4) | 94 | (±2.9) | 88 | (±3.3) | 25 | (±4.6) |
| Dallas Co.††† | 95 | (±2.5) | 79 | (±5.1) | 91 | (±3.4) | 88 | (±4.1) | 91 | (±3.4) | 86 | (±3.8) | 27 | (±5.1) |
| El Paso Co.††† | 89 | (±3.5) | 69 | (±5.2) | 87 | (±3.7) | 84 | (±4.2) | 87 | (±3.8) | 79 | (±3.9) | 18 | (±3.9) |
| Houston††† | 90 | (±4.1) | 69 | (±6.0) | 84 | (±4.8) | 86 | (±4.7) | 85 | (±4.8) | 78 | (±4.9) | 21 | (±4.5) |
| Utah††† | 93 | (±2.7) | 75 | (±4.6) | 90 | (±3.2) | 86 | (±3.7) | 90 | (±3.2) | 73 | (±4.5) | 14 | (±3.6) |
| Vermont*** | 99 | (±0.5) | 91 | (±2.6) | 95 | (±1.9) | 94 | (±2.1) | 96 | (±1.6) | 83 | (±3.2) | 22 | (±3.9) |
| Virginia*** | 94 | (±2.5) | 76 | (±4.6) | 90 | (±3.2) | 90 | (±3.1) | 92 | (±2.9) | 84 | (±3.7) | 32 | (±4.7) |
| Washington*** | 97 | (±1.3) | 84 | (±2.9) | 93 | (±1.9) | 91 | (±2.3) | 93 | (±1.9) | 81 | (±3.0) | 13 | (±2.5) |
| King Co.*** | 94 | (±2.7) | 83 | (±4.2) | 90 | (±3.3) | 92 | (±3.1) | 90 | (±3.4) | 79 | (±4.4) | 13 | (±3.6) |
| West Virginia*** | 98 | (±1.2) | 87 | (±3.6) | 95 | (±2.2) | 91 | (±3.0) | 97 | (±1.7) | 86 | (±3.3) | 19 | (±3.9) |
| Wisconsin*** | 95 | (±1.8) | 83 | (±2.9) | 92 | (±2.1) | 91 | (±2.4) | 93 | (±1.9) | 82 | (±2.8) | 20 | (±2.8) |
| Milwaukee Co.††† | 94 | (±2.7) | 77 | (±4.6) | 88 | (±3.6) | 93 | (±2.7) | 88 | (±3.6) | 77 | (±4.5) | 23 | (±4.2) |
| Wyoming††† | 93 | (±2.6) | 78 | (±4.2) | 89 | (±3.1) | 84 | (±3.8) | 91 | (±2.9) | 82 | (±3.6) | 10 | (±3.0) |
| **Total** | **95** | **(±0.4)** | **81** | **(±0.7)** | **91** | **(±0.5)** | **91** | **(±0.5)** | **93** | **(±0.5)** | **84** | **(±0.6)** | **26** | **(±0.7)** |

* Children in this survey period were born during February 1994–May 1996.
† Three or more doses of diphtheria and tetanus toxoids and pertussis vaccine/diphtheria and tetanus toxoids (DTP/DT).
§ Four or more doses of DTP/DT.
¶ Three or more doses of poliovirus vaccine.
** One or more doses of measles-containing vaccine.
†† Three or more doses of *Haemophilus influenzae* type b vaccine.
§§ One dose of varicella vaccine on or after the first birthday. Data collection for varicella vaine began in July 1996.
¶¶ Confidence interval.
*** Achieved the 1996 Childhood Immunization Initiative (CII) goals for three or more doses of DTP/DT, three or more doses of poliovirus vaccine, one or more doses of MCV, three or more doses of Hib, and three or more doses of hepatitis B vaccine.
††† Did not achieve the 1996 CII goals for at least one of the following: three or more doses of DTP/DT, three or more doses of poliovirus vaccine, one or more doses of MCV, or three or more doses of Hib, but achieved the 1996 goal for three or more doses of hepatitis B vaccine.

*Vaccination Coverage Levels — Continued*

and feedback (*8*), use of reminder and recall systems for vaccination administration (*9*), and state laws requiring vaccination for day care and school entry.

Although VAR coverage increased substantially in 1997, the wide variation among states and urban areas indicates a need for special efforts in most areas. Among children, varicella is the leading cause of vaccine-preventable deaths in the United States, resulting in approximately 1 death per week. Increased coverage with VAR will be enhanced by promotional and education programs to address the lack of knowledge of the health burden associated with varicella in the United States and lack of provider knowledge about vaccine safety, efficacy, and duration of immunity (*10*). The national estimate for the last quarter of this reporting period suggests a continuing upward trend in coverage with VAR.

Although national coverage levels of 90% have been attained for several individual vaccines, substantial variation remains at the state and urban area level, and many states have not achieved 90% coverage levels for specific vaccines. Achieving the national goal of 90% coverage by 2000 will require states to achieve and maintain high coverage levels for each vaccine. Public health efforts must focus on implementing effective strategies that achieve and sustain high vaccination coverage.

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*Notice to Readers*

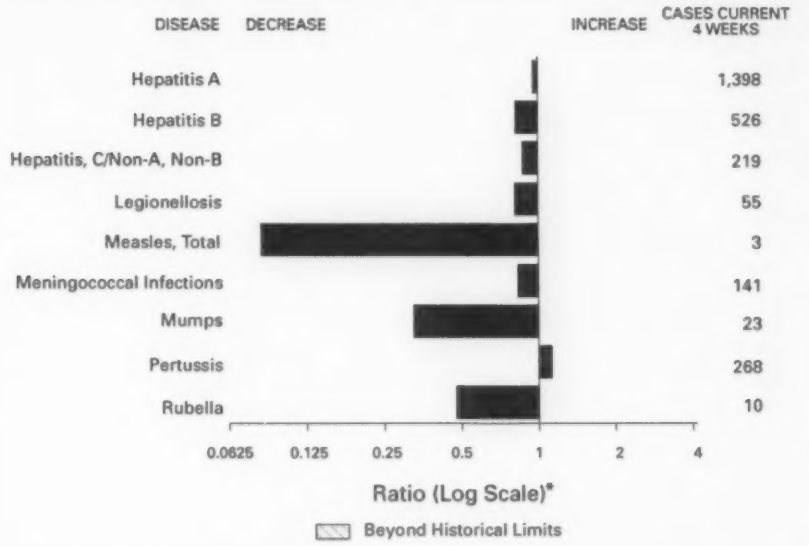
## International Symposium on Tuberculosis Vaccine Development and Evaluation

The 1998 International Symposium on Tuberculosis Vaccine Development and Evaluation will be held August 26–28, 1998, in San Francisco, California. The symposium, cosponsored by CDC's National Vaccine Program Office, the National Institute of Allergy and Infectious Diseases, the American Lung Association, the World Health Organization, the American Thoracic Society, and the International Union Against Tuberculosis and Lung Disease, is for scientists, public health practitioners, infectious disease and pulmonary physicians, other health-care providers, vaccine manufacturers and distributors, and biotechnology firms. Symposium topics will include public health implications of tuberculosis (TB), the status of TB vaccine development, preclinical obstacles for TB candidate vaccines, challenges in TB vaccine evaluation, strategies for overcoming barriers for field testing, and criteria for field site selection. Information on the symposium is available from CDC's National Vaccine Program Office, telephone (404) 639-4168.

## Erratum: Vol. 47, No. SS-2

In the CDC Surveillance Summaries, "Postneonatal Mortality Surveillance—United States, 1980–1994," on page 15, information was incorrectly presented in the results section of the abstract. The third sentence of that section should read, "The PNM *ratio between blacks and whites remained steady at approximately 2.1 during 1982–1988* and gradually increased to 2.4 by 1994." This corrected sentence also replaces the fifth sentence under the Results heading on pages 16–17.

**FIGURE I. Selected notifiable disease reports, comparison of provisional 4-week totals ending July 4, 1998, with historical data — United States**




*Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

**TABLE I. Summary — provisional cases of selected notifiable diseases, United States, cumulative, week ending July 4, 1998 (26th Week)**

| | Cum. 1998 | | Cum. 1998 |
|---|---|---|---|
| Anthrax | - | Plague | 3 |
| Brucellosis | 36 | Poliomyelitis, paralytic¶ | - |
| Cholera | 4 | Psittacosis | 25 |
| Congenital rubella syndrome | 3 | Rabies, human | - |
| Cryptosporidiosis* | 917 | Rocky Mountain spotted fever (RMSF) | 89 |
| Diphtheria | 1 | Streptococcal disease, invasive Group A | 1,287 |
| Encephalitis: California* | 2 | Streptococcal toxic-shock syndrome* | 33 |
| eastern equine* | - | Syphilis, congenital** | 128 |
| St. Louis* | - | Tetanus | 14 |
| western equine* | - | Toxic-shock syndrome | 67 |
| Hansen Disease | 60 | Trichinosis | 6 |
| Hantavirus pulmonary syndrome*† | 5 | Typhoid fever | 139 |
| Hemolytic uremic syndrome, post-diarrheal* | 19 | Yellow fever | - |
| HIV infection, pediatric*§ | 127 | | |

-:no reported cases
*Not notifiable in all states.
†Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases (NCID).
§Updated monthly to the Division of HIV/AIDS Prevention–Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention (NCHSTP), last update June 28, 1998.
¶One suspected case of polio with onset in 1998 has been reported to date.
**Updated from reports to the Division of STD Prevention, NCHSTP.

## TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending July 4, 1998, and June 28, 1997 (26th Week)

| Reporting Area | AIDS | | Chlamydia | | *Escherichia coli* O157:H7 | | Gonorrhea | | Hepatitis C/NA,NB | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | NETSS† | PHLIS§ | | | | |
| | Cum. 1998* | Cum. 1997 | Cum. 1998 | Cum. 1997 | Cum. 1998 | Cum. 1998 | Cum. 1998 | Cum. 1997 | Cum. 1998 | Cum. 1997 |
| UNITED STATES | 23,929 | 30,843 | 258,443 | 247,851 | 812 | 405 | 149,101 | 144,806 | 2,012 | 1,678 |
| NEW ENGLAND | 830 | 1,267 | 9,401 | 8,621 | 114 | 90 | 2,497 | 2,929 | 27 | 35 |
| Maine | 18 | 28 | 467 | 484 | 9 | - | 34 | 29 | - | - |
| N.H. | 22 | 17 | 459 | 388 | 18 | 18 | 46 | 58 | - | - |
| Vt. | 10 | 24 | 194 | 196 | 4 | 4 | 13 | 25 | - | 1 |
| Mass. | 386 | 462 | 4,144 | 3,546 | 59 | 52 | 993 | 1,095 | 25 | 30 |
| R.I. | 67 | 81 | 1,230 | 1,019 | 3 | 1 | 180 | 242 | 2 | 4 |
| Conn. | 327 | 655 | 2,907 | 2,988 | 21 | 15 | 1,231 | 1,480 | - | - |
| MID. ATLANTIC | 6,951 | 9,739 | 31,057 | 27,085 | 80 | 18 | 17,179 | 17,404 | 212 | 150 |
| Upstate N.Y. | 849 | 1,620 | N | N | 57 | - | 2,961 | 2,979 | 162 | 112 |
| N.Y. City | 3,910 | 4,965 | 17,038 | 13,136 | 3 | 6 | 7,401 | 6,547 | - | - |
| N.J. | 1,232 | 2,006 | 4,885 | 4,858 | 20 | 11 | 2,734 | 3,579 | - | - |
| Pa. | 960 | 1,148 | 9,134 | 9,091 | N | 1 | 4,083 | 4,299 | 50 | 38 |
| E.N. CENTRAL | 1,768 | 2,131 | 42,769 | 35,869 | 149 | 78 | 29,361 | 21,283 | 256 | 327 |
| Ohio | 331 | 409 | 12,419 | 10,775 | 36 | 16 | 7,564 | 6,659 | 6 | 7 |
| Ind. | 326 | 360 | 2,706 | 4,204 | 51 | 22 | 1,769 | 2,820 | 3 | 9 |
| Ill. | 708 | 760 | 12,462 | 6,476 | 33 | - | 10,038 | 3,206 | 11 | 54 |
| Mich. | 305 | 473 | 10,844 | 9,052 | 29 | 20 | 8,269 | 6,404 | 236 | 239 |
| Wis. | 100 | 129 | 4,338 | 5,362 | N | 20 | 1,721 | 2,194 | - | 18 |
| W.N. CENTRAL | 444 | 603 | 14,744 | 15,679 | 97 | 51 | 7,085 | 6,942 | 111 | 34 |
| Minn. | 65 | 99 | 2,401 | 3,271 | 38 | 26 | 858 | 1,139 | 6 | 2 |
| Iowa | 49 | 69 | 2,010 | 2,285 | 25 | - | 638 | 614 | 11 | 17 |
| Mo. | 209 | 294 | 5,634 | 5,762 | 10 | 17 | 4,034 | 3,725 | 90 | 4 |
| N. Dak. | 4 | 6 | 290 | 427 | 2 | 5 | 29 | 30 | - | 2 |
| S. Dak. | 9 | 3 | 809 | 621 | 6 | 1 | 129 | 66 | - | - |
| Nebr. | 39 | 49 | 1,095 | 1,007 | 7 | - | 366 | 371 | 2 | 2 |
| Kans. | 69 | 83 | 2,505 | 2,306 | 9 | 2 | 1,031 | 997 | 2 | 7 |
| S. ATLANTIC | 5,900 | 7,638 | 54,111 | 46,356 | 66 | 29 | 43,470 | 45,229 | 101 | 112 |
| Del. | 75 | 144 | 1,241 | - | - | 1 | 673 | 566 | - | - |
| Md. | 718 | 949 | 4,129 | 3,647 | 12 | 4 | 4,703 | 5,790 | 5 | 3 |
| D.C. | 481 | 533 | N | N | 1 | - | 1,756 | 2,076 | - | - |
| Va. | 425 | 599 | 5,342 | 5,533 | N | 7 | 3,046 | 4,003 | 5 | 11 |
| W. Va. | 57 | 57 | 1,322 | 1,431 | N | 2 | 371 | 474 | 4 | 9 |
| N.C. | 390 | 423 | 10,900 | 8,329 | 12 | 10 | 9,143 | 7,996 | 12 | 29 |
| S.C. | 386 | 403 | 9,309 | 6,151 | 2 | - | 6,043 | 5,590 | 2 | 26 |
| Ga. | 616 | 970 | 12,196 | 8,513 | 22 | - | 10,026 | 9,806 | 9 | - |
| Fla. | 2,752 | 3,560 | 9,672 | 12,752 | 14 | 5 | 7,707 | 8,928 | 64 | 34 |
| E.S. CENTRAL | 936 | 1,018 | 17,829 | 16,924 | 43 | 11 | 16,851 | 16,625 | 77 | 188 |
| Ky. | 127 | 177 | 3,052 | 3,336 | 10 | - | 1,753 | 2,089 | 14 | 8 |
| Tenn. | 333 | 413 | 6,228 | 6,287 | 22 | 10 | 5,297 | 5,241 | 60 | 120 |
| Ala. | 274 | 239 | 4,889 | 3,986 | 11 | - | 6,113 | 5,619 | 3 | 6 |
| Miss. | 202 | 189 | 3,660 | 3,315 | U | 1 | 3,688 | 3,676 | U | 54 |
| W.S. CENTRAL | 2,899 | 3,145 | 36,049 | 28,793 | 51 | 8 | 20,551 | 18,959 | 514 | 197 |
| Ark. | 104 | 120 | 1,647 | 1,416 | 4 | 3 | 1,153 | 2,315 | 5 | 6 |
| La. | 512 | 562 | 6,429 | 4,142 | - | 2 | 5,274 | 3,865 | 10 | 104 |
| Okla. | 170 | 138 | 4,875 | 3,662 | 6 | 3 | 2,656 | 2,330 | 2 | 4 |
| Tex. | 2,113 | 2,325 | 23,098 | 19,573 | 41 | - | 11,468 | 10,449 | 497 | 83 |
| MOUNTAIN | 831 | 900 | 9,212 | 13,886 | 84 | 50 | 3,331 | 3,749 | 237 | 152 |
| Mont. | 15 | 22 | 632 | 513 | 6 | - | 23 | 20 | 5 | 10 |
| Idaho | 15 | 28 | 917 | 709 | 9 | 1 | 83 | 52 | 87 | 23 |
| Wyo. | 2 | 13 | 330 | 284 | 2 | - | 15 | 26 | 43 | 40 |
| Colo. | 147 | 224 | - | 3,108 | 22 | 18 | 1,132 | 1,050 | 14 | 18 |
| N. Mex. | 130 | 80 | 1,878 | 1,925 | 10 | 6 | 371 | 441 | 52 | 32 |
| Ariz. | 329 | 227 | 4,002 | 5,052 | N | 9 | 1,457 | 1,598 | 3 | 18 |
| Utah | 65 | 73 | 1,144 | 836 | 15 | 10 | 112 | 121 | 20 | 3 |
| Nev. | 128 | 233 | 309 | 1,459 | 7 | 6 | 138 | 441 | 13 | 8 |
| PACIFIC | 3,370 | 4,402 | 43,271 | 54,638 | 128 | 70 | 8,776 | 11,686 | 477 | 483 |
| Wash. | 236 | 288 | 5,583 | 4,628 | 27 | 22 | 953 | 973 | 10 | 14 |
| Oreg. | 93 | 144 | 2,821 | 2,388 | 33 | 27 | 367 | 362 | 2 | 2 |
| Calif. | 2,962 | 3,912 | 32,903 | 46,050 | 66 | 18 | 7,097 | 9,895 | 410 | 382 |
| Alaska | 12 | 22 | 946 | 724 | 2 | - | 156 | 210 | 1 | - |
| Hawaii | 67 | 36 | 1,018 | 848 | N | 3 | 203 | 246 | 54 | 85 |
| Guam | - | 2 | 8 | 193 | N | - | 2 | 27 | - | - |
| P.R. | 1,001 | 1,019 | U | U | - | U | 216 | 335 | - | - |
| V.I. | 17 | 51 | N | N | N | U | U | U | U | U |
| Amer. Samoa | - | - | U | U | N | U | U | U | U | U |
| C.N.M.I. | - | 1 | N | N | N | U | 14 | 16 | - | 2 |

N: Not notifiable U: Unavailable -: no reported cases C.N.M.I.: Commonwealth of Northern Mariana Islands

*Updated monthly to the Division of HIV/AIDS Prevention–Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention, last update June 28, 1998.

†National Electronic Telecommunications System for Surveillance.

§Public Health Laboratory Information System.

## TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending July 4, 1998, and June 28, 1997 (26th Week)

| Reporting Area | Legionellosis | | Lyme Disease | | Malaria | | Syphilis (Primary & Secondary) | | Tuberculosis | | Rabies, Animal |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cum. 1998 | Cum. 1997 | Cum. 1998 | Cum. 1997 | Cum. 1998 | Cum. 1997 | Cum. 1998 | Cum. 1997 | Cum. 1998* | Cum. 1997 | Cum. 1998 |
| UNITED STATES | 506 | 418 | 2,735 | 2,361 | 541 | 757 | 3,273 | 4,304 | 5,962 | 8,473 | 3,457 |
| NEW ENGLAND | 25 | 27 | 805 | 524 | 20 | 39 | 38 | 87 | 157 | 216 | 655 |
| Maine | 1 | 1 | 3 | 3 | 4 | 1 | 1 | - | U | 15 | 113 |
| N.H. | 3 | 4 | 17 | 7 | 3 | 2 | 1 | - | 6 | 6 | 33 |
| Vt. | 1 | 4 | 4 | 3 | - | 2 | 3 | - | 1 | 3 | 30 |
| Mass. | 10 | 8 | 175 | 89 | 11 | 17 | 24 | 40 | 120 | 117 | 222 |
| R.I. | 4 | 5 | 32 | 43 | 2 | 3 | - | 2 | 30 | 16 | 36 |
| Conn. | 6 | 5 | 574 | 379 | - | 14 | 9 | 45 | U | 59 | 221 |
| MID. ATLANTIC | 109 | 70 | 1,532 | 1,442 | 135 | 225 | 101 | 210 | 1,118 | 1,482 | 779 |
| Upstate N.Y. | 32 | 18 | 815 | 503 | 36 | 35 | 16 | 24 | 148 | 207 | 541 |
| N.Y. City | 19 | 4 | 10 | 80 | 65 | 139 | 23 | 40 | 690 | 782 | U |
| N.J. | 4 | 14 | 238 | 370 | 20 | 38 | 19 | 90 | 280 | 303 | 97 |
| Pa. | 54 | 34 | 469 | 489 | 14 | 13 | 43 | 56 | U | 190 | 141 |
| E.N. CENTRAL | 154 | 149 | 43 | 36 | 46 | 79 | 462 | 363 | 459 | 867 | 50 |
| Ohio | 66 | 65 | 37 | 12 | 3 | 9 | 74 | 112 | 5 | 149 | 37 |
| Ind. | 23 | 26 | 5 | 10 | 2 | 7 | 100 | 75 | 6 | 79 | 4 |
| Ill. | 14 | 5 | - | 4 | 15 | 35 | 174 | 45 | 276 | 439 | 2 |
| Mich. | 31 | 32 | 1 | 10 | 25 | 17 | 89 | 59 | 172 | 145 | 6 |
| Wis. | 20 | 21 | U | U | 1 | 11 | 25 | 72 | U | 55 | 1 |
| W.N. CENTRAL | 37 | 28 | 22 | 29 | 33 | 24 | 71 | 88 | 119 | 262 | 366 |
| Minn. | 3 | 1 | 9 | 15 | 17 | 9 | 3 | 13 | U | 69 | 69 |
| Iowa | 4 | 7 | 9 | 1 | 3 | 6 | - | 3 | U | 30 | 82 |
| Mo. | 14 | 3 | 1 | 11 | 9 | 5 | 55 | 51 | 82 | 100 | 17 |
| N. Dak. | - | 2 | - | - | 2 | 1 | - | - | U | 5 | 74 |
| S. Dak. | 1 | 2 | - | - | - | - | 1 | - | 14 | 7 | 66 |
| Nebr. | 12 | 10 | 1 | 1 | - | 1 | 4 | 1 | 5 | 12 | 3 |
| Kans. | 3 | 3 | 2 | 1 | 2 | 2 | 8 | 20 | 18 | 39 | 57 |
| S. ATLANTIC | 70 | 55 | 235 | 209 | 133 | 123 | 1,374 | 1,694 | 924 | 1,605 | 1,080 |
| Del. | 7 | 7 | 5 | 41 | 1 | 2 | 15 | 15 | - | 17 | 17 |
| Md. | 14 | 11 | 159 | 135 | 44 | 42 | 331 | 477 | 142 | 146 | 263 |
| D.C. | 4 | 3 | 4 | 7 | 10 | 9 | 39 | 65 | 58 | 50 | - |
| Va. | 7 | 11 | 21 | 4 | 22 | 32 | 87 | 139 | 118 | 165 | 336 |
| W. Va. | N | N | 5 | 1 | - | - | 2 | 3 | 24 | 27 | 42 |
| N.C. | 6 | 6 | 13 | 8 | 12 | 7 | 383 | 360 | 205 | 196 | 136 |
| S.C. | 5 | 2 | 2 | 1 | 4 | 9 | 161 | 211 | 159 | 187 | 77 |
| Ga. | 2 | - | 2 | 1 | 15 | 14 | 240 | 271 | 218 | 286 | 102 |
| Fla. | 24 | 15 | 24 | 11 | 25 | 8 | 116 | 153 | U | 531 | 107 |
| E.S. CENTRAL | 21 | 28 | 25 | 38 | 14 | 16 | 554 | 920 | 160 | 634 | 130 |
| Ky. | 12 | 7 | 7 | 5 | 2 | 4 | 59 | 76 | U | 95 | 19 |
| Tenn. | 6 | 14 | 8 | 15 | 8 | 4 | 284 | 385 | U | 234 | 79 |
| Ala. | 3 | 2 | 10 | 4 | 4 | 5 | 132 | 238 | 160 | 201 | 32 |
| Miss. | U | 5 | U | 14 | U | 3 | 79 | 221 | U | 104 | U |
| W.S. CENTRAL | 16 | 5 | 10 | 27 | 17 | 8 | 410 | 649 | 53 | 1,261 | 106 |
| Ark. | - | - | 5 | 8 | 1 | 2 | 54 | 96 | 53 | 107 | 21 |
| La. | 1 | 1 | - | 1 | 4 | 4 | 150 | 200 | - | 85 | - |
| Okla. | 6 | 1 | - | 4 | 2 | 2 | 25 | 57 | U | 114 | 85 |
| Tex. | 9 | 3 | 5 | 14 | 10 | - | 181 | 296 | U | 955 | - |
| MOUNTAIN | 31 | 29 | 4 | 4 | 27 | 37 | 102 | 82 | 223 | 255 | 82 |
| Mont. | 1 | 1 | - | - | - | 2 | - | - | 12 | 6 | 29 |
| Idaho | - | 2 | 1 | - | 3 | - | - | - | 8 | 7 | - |
| Wyo. | 1 | 1 | - | 1 | - | 2 | 1 | - | 2 | 2 | 41 |
| Colo. | 6 | 9 | 2 | - | 7 | 18 | 8 | 4 | U | 49 | 1 |
| N. Mex. | 2 | 1 | - | - | 11 | 5 | 12 | 4 | 28 | 19 | 2 |
| Ariz. | 4 | 7 | - | 1 | 5 | 4 | 76 | 65 | 111 | 115 | 7 |
| Utah | 16 | 5 | - | - | 1 | 2 | 3 | 3 | 33 | 11 | 2 |
| Nev. | 1 | 3 | 1 | 2 | - | 4 | 2 | 6 | 29 | 46 | - |
| PACIFIC | 43 | 27 | 59 | 52 | 116 | 206 | 161 | 211 | 2,749 | 1,891 | 207 |
| Wash. | 5 | 6 | 2 | 1 | 9 | 8 | 12 | 7 | 120 | 146 | - |
| Oreg. | - | - | 8 | 10 | 11 | 10 | 2 | 4 | 58 | 83 | 1 |
| Calif. | 37 | 20 | 48 | 41 | 95 | 181 | 147 | 198 | 2,464 | 1,523 | 186 |
| Alaska | - | - | 1 | - | - | 3 | - | 1 | 25 | 44 | 20 |
| Hawaii | 1 | 1 | - | - | 1 | 4 | - | 1 | 82 | 95 | - |
| Guam | - | - | - | - | - | - | - | 3 | - | 13 | - |
| P.R. | - | - | - | - | - | 3 | 114 | 122 | 46 | 88 | 28 |
| V.I. | U | U | U | U | U | U | U | U | U | U | U |
| Amer. Samoa | U | U | U | U | U | U | U | U | U | U | U |
| C.N.M.I. | - | - | - | - | - | - | 98 | 9 | 54 | 2 | - |

N: Not notifiable U: Unavailable -: no reported cases

*Additional information about areas displaying "U" for cumulative 1998 Tuberculosis cases can be found in Notice to Readers, *MMWR* Vol. 47, No. 2, p. 39.

## TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending July 4, 1998, and June 28, 1997 (26th Week)

| Reporting Area | *H. influenzae*, invasive | | Hepatitis (Viral), by type | | | | Measles (Rubeola) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | A | | B | | Indigenous | | Imported† | | Total | |
| | Cum. 1998* | Cum. 1997 | Cum. 1998 | Cum. 1997 | Cum. 1998 | Cum. 1997 | 1998 | Cum. 1998 | 1998 | Cum. 1998 | Cum. 1998 | Cum. 1997 |
| UNITED STATES | 563 | 617 | 10,981 | 13,854 | 3,908 | 4,610 | - | 24 | - | 13 | 37 | 73 |
| NEW ENGLAND | 33 | 35 | 140 | 312 | 62 | 84 | - | 1 | - | 1 | 2 | 10 |
| Maine | 2 | 3 | 13 | 41 | 2 | 6 | - | - | - | - | - | - |
| N.H. | 5 | 5 | 7 | 18 | 10 | 9 | - | - | - | - | - | 1 |
| Vt. | 2 | 3 | 13 | 7 | 1 | 5 | - | - | - | - | - | - |
| Mass. | 22 | 21 | 42 | 154 | 17 | 37 | - | 1 | - | 1 | 2 | 8 |
| R.I. | 2 | 2 | 9 | 28 | 32 | 8 | - | - | - | - | - | - |
| Conn. | - | 1 | 56 | 64 | - | 23 | - | - | - | - | - | 1 |
| MID. ATLANTIC | 80 | 84 | 706 | 1,148 | 575 | 670 | - | 9 | - | 2 | 11 | 16 |
| Upstate N.Y. | 33 | 19 | 166 | 157 | 158 | 127 | - | 2 | - | - | 2 | 4 |
| N.Y. City | 15 | 23 | 188 | 512 | 143 | 266 | - | - | - | - | - | 5 |
| N.J. | 28 | 28 | 161 | 177 | 105 | 128 | - | 7 | - | 1 | 8 | 2 |
| Pa. | 4 | 14 | 191 | 302 | 169 | 149 | - | - | - | 1 | 1 | 5 |
| E.N. CENTRAL | 84 | 92 | 1,356 | 1,481 | 385 | 774 | - | 9 | - | 3 | 12 | 8 |
| Ohio | 34 | 46 | 177 | 200 | 37 | 42 | - | - | - | 1 | 1 | - |
| Ind. | 23 | 8 | 89 | 146 | 37 | 55 | - | 2 | - | 1 | 3 | - |
| Ill. | 23 | 25 | 219 | 374 | 67 | 146 | - | - | - | - | - | 6 |
| Mich. | - | 13 | 773 | 650 | 228 | 234 | - | 7 | - | 1 | 8 | 2 |
| Wis. | 4 | - | 98 | 111 | 16 | 297 | - | - | - | - | - | - |
| W.N. CENTRAL | 51 | 30 | 675 | 1,021 | 176 | 265 | - | - | - | - | - | 11 |
| Minn. | 37 | 21 | 69 | 90 | 18 | 23 | - | - | - | - | - | 2 |
| Iowa | 1 | 3 | 374 | 159 | 33 | 20 | - | - | - | - | - | - |
| Mo. | 8 | 3 | 346 | 556 | 98 | 194 | U | - | U | - | - | 1 |
| N. Dak. | - | - | 3 | 9 | 4 | 3 | - | - | - | - | - | - |
| S. Dak. | - | 2 | 16 | 14 | 1 | - | - | - | - | - | - | 8 |
| Nebr. | - | 1 | 15 | 41 | 7 | 8 | - | - | - | - | - | - |
| Kans. | 5 | - | 52 | 152 | 15 | 17 | - | - | - | - | - | - |
| S. ATLANTIC | 119 | 101 | 946 | 748 | 569 | 548 | - | 2 | - | 5 | 7 | 3 |
| Del. | - | - | 2 | 16 | - | 3 | - | - | - | 1 | 1 | - |
| Md. | 38 | 42 | 173 | 118 | 83 | 82 | - | - | - | 1 | 1 | 1 |
| D.C. | - | - | 30 | 14 | 6 | 21 | - | - | - | - | - | 1 |
| Va. | 12 | 7 | 129 | 99 | 53 | 64 | - | - | - | 2 | 2 | - |
| W. Va. | 4 | 3 | 1 | 6 | 3 | 9 | - | - | - | - | - | - |
| N.C. | 15 | 17 | 51 | 105 | 111 | 121 | - | - | - | - | - | 1 |
| S.C. | 4 | 3 | 17 | 65 | 8 | 60 | - | - | - | - | - | - |
| Ga. | 24 | 20 | 253 | 173 | 92 | 57 | - | - | - | 1 | 1 | - |
| Fla. | 22 | 9 | 290 | 152 | 213 | 131 | - | 2 | - | - | 2 | - |
| E.S. CENTRAL | 31 | 37 | 180 | 347 | 189 | 359 | - | - | - | - | - | 1 |
| Ky. | 4 | 4 | 12 | 44 | 22 | 22 | - | - | - | - | - | - |
| Tenn. | 20 | 23 | 123 | 212 | 135 | 240 | - | - | - | - | - | - |
| Ala. | 7 | 8 | 45 | 52 | 32 | 38 | - | - | - | - | - | 1 |
| Miss. | U | 2 | U | 39 | U | 59 | U | U | U | U | U | - |
| W.S. CENTRAL | 30 | 29 | 2,072 | 2,832 | 646 | 547 | - | - | - | - | - | 4 |
| Ark. | - | 2 | 43 | 127 | 46 | 41 | - | - | - | - | - | - |
| La. | 13 | 6 | 41 | 110 | 47 | 63 | - | - | - | - | - | - |
| Okla. | 15 | 19 | 283 | 845 | 31 | 18 | - | - | - | - | - | - |
| Tex. | 2 | 2 | 1,705 | 1,750 | 522 | 425 | - | - | - | - | - | 4 |
| MOUNTAIN | 67 | 64 | 1,732 | 2,048 | 434 | 447 | - | - | - | - | - | 7 |
| Mont. | - | - | 56 | 50 | 3 | 5 | - | - | - | - | - | - |
| Idaho | - | 1 | 142 | 77 | 18 | 15 | - | - | - | - | - | - |
| Wyo. | - | 1 | 23 | 20 | 2 | 14 | - | - | - | - | - | - |
| Colo. | 14 | 9 | 131 | 231 | 52 | 85 | - | - | - | - | - | - |
| N. Mex. | 5 | 6 | 85 | 162 | 176 | 149 | - | - | - | - | - | 5 |
| Ariz. | 38 | 23 | 1,108 | 957 | 119 | 96 | - | - | - | - | - | - |
| Utah | 4 | 3 | 118 | 346 | 39 | 53 | - | - | - | - | - | 2 |
| Nev. | 6 | 21 | 69 | 205 | 25 | 30 | U | - | U | - | - | - |
| PACIFIC | 68 | 145 | 2,974 | 3,917 | 872 | 916 | - | 3 | - | 2 | 5 | 13 |
| Wash. | 4 | 2 | 573 | 280 | 64 | 39 | - | - | - | 1 | 1 | - |
| Oreg. | 29 | 24 | 209 | 193 | 58 | 57 | - | - | - | - | - | - |
| Calif. | 28 | 113 | 2,155 | 3,345 | 739 | 803 | - | 3 | - | 1 | 4 | 10 |
| Alaska | 1 | 1 | 14 | 22 | 6 | 11 | - | - | - | - | - | - |
| Hawaii | 6 | 5 | 23 | 77 | 5 | 6 | - | - | - | - | - | 3 |
| Guam | - | - | - | - | - | 3 | U | - | U | - | - | - |
| P.R. | 2 | - | 23 | 180 | 238 | 391 | - | - | - | - | - | - |
| V.I. | U | U | U | U | U | U | U | U | U | U | U | U |
| Amer. Samoa | U | U | U | U | U | U | U | U | U | U | U | U |
| C.N.M.I. | - | 5 | 1 | 1 | 28 | 26 | U | - | U | - | - | 1 |

N: Not notifiable U: Unavailable - no reported cases

*Of 132 cases among children aged <5 years, serotype was reported for 74 and of those, 32 were type b.

†For imported measles, cases include only those resulting from importation from other countries.

## TABLE III. (Cont'd.) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending July 4, 1998, and June 28, 1997 (26th Week)

| Reporting Area | Meningococcal Disease | | Mumps | | | Pertussis | | | Rubella | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cum. 1998 | Cum. 1997 | 1998 | Cum. 1998 | Cum. 1997 | 1998 | Cum. 1998 | Cum. 1997 | 1998 | Cum. 1998 | Cum. 1997 |
| UNITED STATES | 1,540 | 2,002 | 7 | 243 | 354 | 60 | 2,135 | 2,645 | 1 | 252 | 87 |
| NEW ENGLAND | 69 | 123 | - | 1 | 7 | 3 | 373 | 548 | - | 33 | 1 |
| Maine | 4 | 12 | - | - | - | - | 5 | 6 | - | - | - |
| N.H. | 4 | 12 | - | - | - | - | 34 | 62 | - | - | - |
| Vt. | 1 | 2 | - | - | - | - | 36 | 172 | - | - | - |
| Mass. | 34 | 64 | - | 1 | 2 | 3 | 282 | 285 | - | 6 | 1 |
| R.I. | 3 | 8 | - | - | 4 | - | 3 | 12 | - | - | - |
| Conn. | 23 | 25 | - | - | 1 | - | 13 | 11 | - | 27 | - |
| MID. ATLANTIC | 144 | 205 | - | 16 | 43 | 10 | 274 | 212 | - | 112 | 24 |
| Upstate N.Y. | 37 | 58 | - | 3 | 9 | 10 | 140 | 78 | - | 105 | 4 |
| N.Y. City | 16 | 36 | - | 4 | 3 | - | 4 | 50 | - | 2 | 20 |
| N.J. | 39 | 41 | - | 1 | 7 | - | 5 | 11 | - | 4 | - |
| Pa. | 52 | 70 | - | 8 | 24 | - | 125 | 73 | - | 1 | - |
| E.N. CENTRAL | 221 | 297 | 1 | 42 | 37 | 9 | 196 | 252 | - | - | 4 |
| Ohio | 83 | 106 | - | 19 | 14 | 1 | 72 | 74 | - | - | - |
| Ind. | 41 | 33 | 1 | 5 | 4 | 8 | 61 | 29 | - | - | - |
| Ill. | 47 | 89 | - | 1 | 8 | - | 14 | 34 | - | - | - |
| Mich. | 26 | 41 | - | 17 | 10 | - | 32 | 31 | - | - | - |
| Wis. | 24 | 28 | - | - | 1 | - | 17 | 84 | - | - | 4 |
| W.N. CENTRAL | 125 | 147 | - | 20 | 12 | - | 168 | 153 | - | 13 | - |
| Minn. | 24 | 24 | - | 10 | 5 | - | 100 | 98 | - | - | - |
| Iowa | 20 | 31 | - | 6 | 6 | - | 39 | 8 | - | - | - |
| Mo. | 48 | 68 | U | 3 | - | U | 12 | 25 | U | 2 | - |
| N. Dak. | - | 1 | - | 1 | - | - | - | 1 | - | - | - |
| S. Dak. | 6 | 4 | - | - | - | - | 4 | 3 | - | - | - |
| Nebr. | 4 | 5 | - | - | 1 | - | 5 | 3 | - | - | - |
| Kans. | 23 | 14 | - | - | - | - | 8 | 15 | - | 11 | - |
| S. ATLANTIC | 278 | 335 | 2 | 34 | 41 | 2 | 130 | 232 | 1 | 8 | 29 |
| Del. | 1 | 4 | - | - | - | - | 1 | - | - | - | - |
| Md. | 23 | 35 | - | - | 1 | - | 26 | 79 | - | - | - |
| D.C. | - | 5 | - | - | - | - | 1 | 2 | - | - | - |
| Va. | 23 | 34 | 1 | 5 | 6 | - | 6 | 25 | - | - | 1 |
| W. Va. | 9 | 14 | - | - | - | - | 1 | 4 | - | - | - |
| N.C. | 40 | 62 | - | 8 | 7 | - | 44 | 68 | - | 5 | 22 |
| S.C. | 44 | 38 | - | 4 | 10 | - | 15 | 11 | - | - | 6 |
| Ga. | 61 | 62 | - | 1 | 5 | - | 6 | 6 | - | - | - |
| Fla. | 77 | 81 | 1 | 16 | 12 | 2 | 30 | 37 | 1 | 3 | - |
| E.S. CENTRAL | 107 | 148 | - | 1 | 19 | 2 | 50 | 51 | - | - | 1 |
| Ky. | 16 | 38 | - | - | 3 | 2 | 20 | 13 | - | - | - |
| Tenn. | 42 | 48 | - | 1 | 3 | - | 17 | 20 | - | - | - |
| Ala. | 49 | 45 | - | - | 6 | - | 13 | 12 | - | - | 1 |
| Miss. | U | 17 | U | U | 7 | U | U | 6 | U | U | - |
| W.S. CENTRAL | 180 | 192 | 3 | 34 | 42 | 4 | 139 | 83 | - | 68 | 3 |
| Ark. | 22 | 25 | - | - | - | 1 | 19 | 6 | - | - | - |
| La. | 35 | 38 | 3 | 5 | 11 | - | 1 | 11 | - | - | - |
| Okla. | 27 | 23 | - | - | - | - | 13 | 9 | - | - | - |
| Tex. | 96 | 106 | - | 29 | 31 | 3 | 106 | 57 | - | 68 | 3 |
| MOUNTAIN | 86 | 118 | 1 | 22 | 46 | 21 | 483 | 688 | - | 5 | 5 |
| Mont. | 3 | 7 | - | - | - | - | 1 | 8 | - | - | - |
| Idaho | 4 | 8 | - | 3 | 2 | 1 | 189 | 433 | - | - | 1 |
| Wyo. | 3 | 1 | - | 1 | 1 | - | 7 | 4 | - | - | - |
| Colo. | 19 | 30 | - | 4 | 3 | 1 | 97 | 182 | - | - | - |
| N. Mex. | 15 | 19 | N | N | N | - | 64 | 32 | - | 1 | - |
| Ariz. | 30 | 30 | 1 | 5 | 29 | 18 | 89 | 15 | - | 1 | 4 |
| Utah | 9 | 11 | - | 3 | 6 | 1 | 24 | 4 | - | 2 | - |
| Nev. | 3 | 12 | U | 6 | 5 | U | 12 | 10 | U | 1 | - |
| PACIFIC | 330 | 437 | - | 73 | 107 | 9 | 322 | 426 | - | 13 | 20 |
| Wash. | 41 | 52 | - | 5 | 12 | 9 | 148 | 182 | - | 9 | 5 |
| Oreg. | 56 | 89 | N | N | N | - | 19 | 22 | - | - | - |
| Calif. | 228 | 293 | - | 53 | 78 | - | 149 | 209 | - | 2 | 8 |
| Alaska | 1 | 1 | - | 2 | 5 | - | 2 | 2 | - | - | - |
| Hawaii | 4 | 2 | - | 13 | 12 | - | 4 | 11 | - | 2 | 7 |
| Guam | - | 1 | U | - | 1 | U | - | - | U | - | - |
| P.R. | 5 | 8 | - | 1 | 4 | - | 2 | - | - | - | - |
| V.I. | U | U | U | U | U | U | U | U | U | U | U |
| Amer. Samoa | U | U | U | U | U | U | U | U | U | U | U |
| C.N.M.I. | - | - | U | 2 | 4 | U | 1 | - | U | - | - |

N: Not notifiable U: Unavailable -: no reported cases

# TABLE IV. Deaths in 122 U.S. cities,* week ending July 4, 1998 (26th Week)

| Reporting Area | All Causes, By Age (Years) | | | | | | P&I† Total |
|---|---|---|---|---|---|---|---|
| | All Ages | >65 | 45-64 | 25-44 | 1-24 | <1 | |
| NEW ENGLAND | 514 | 358 | 102 | 29 | 15 | 10 | 30 |
| Boston, Mass. | 118 | 76 | 27 | 4 | 8 | 5 | 13 |
| Bridgeport, Conn. | 48 | 37 | 6 | 4 | 1 | - | 1 |
| Cambridge, Mass. | 17 | 13 | 3 | 1 | - | - | - |
| Fall River, Mass. | 30 | 24 | 5 | 1 | - | - | - |
| Hartford, Conn. | 30 | 17 | 8 | 1 | 2 | 2 | - |
| Lowell, Mass. | 25 | 19 | 6 | - | - | - | 2 |
| Lynn, Mass. | 11 | 7 | 2 | 2 | - | - | - |
| New Bedford, Mass. | 20 | 18 | 2 | - | - | - | - |
| New Haven, Conn. | 32 | 17 | 12 | 3 | - | - | - |
| Providence, R.I. | 48 | 37 | 5 | - | 5 | 1 | 2 |
| Somerville, Mass. | 4 | 4 | - | - | - | - | - |
| Springfield, Mass. | 44 | 28 | 9 | 6 | - | 1 | 6 |
| Waterbury, Conn. | 29 | 21 | 4 | 4 | - | - | - |
| Worcester, Mass. | 58 | 40 | 13 | 3 | 1 | 1 | 6 |
| MID. ATLANTIC | 2,059 | 1,443 | 386 | 160 | 41 | 29 | 82 |
| Albany, N.Y. | 35 | 21 | 11 | 1 | 1 | 1 | 1 |
| Allentown, Pa. | U | U | U | U | U | U | U |
| Buffalo, N.Y. | 71 | 53 | 13 | 3 | 2 | - | 11 |
| Camden, N.J. | 19 | 14 | 2 | 1 | - | 2 | - |
| Elizabeth, N.J. | 7 | 5 | 1 | 1 | - | - | - |
| Erie, Pa. | 51 | 38 | 8 | 5 | - | - | - |
| Jersey City, N.J. | 34 | 23 | 7 | 3 | 1 | - | - |
| New York City, N.Y. | 1,117 | 757 | 224 | 104 | 22 | 10 | 35 |
| Newark, N.J. | 18 | 10 | 7 | 1 | - | - | - |
| Paterson, N.J. | 29 | 19 | 6 | 1 | - | 3 | - |
| Philadelphia, Pa. | 300 | 201 | 58 | 24 | 9 | 8 | 11 |
| Pittsburgh, Pa.§ | 40 | 31 | 6 | 3 | - | - | 3 |
| Reading, Pa. | 22 | 21 | 1 | - | - | - | 1 |
| Rochester, N.Y. | 101 | 86 | 10 | 3 | 1 | 1 | 5 |
| Schenectady, N.Y. | 26 | 20 | 3 | 1 | 2 | - | - |
| Scranton, Pa. | 33 | 29 | 4 | - | - | - | 2 |
| Syracuse, N.Y. | 92 | 67 | 18 | 2 | 3 | 2 | 10 |
| Trenton, N.J. | 39 | 27 | 4 | 6 | - | 2 | 3 |
| Utica, N.Y. | 25 | 21 | 3 | 1 | - | - | - |
| Yonkers, N.Y. | U | U | U | U | U | U | U |
| E.N. CENTRAL | 1,719 | 1,130 | 351 | 133 | 61 | 44 | 96 |
| Akron, Ohio | 36 | 25 | 6 | 4 | 1 | - | - |
| Canton, Ohio | 48 | 33 | 13 | 2 | - | - | 10 |
| Chicago, Ill. | 423 | 231 | 101 | 52 | 23 | 16 | 22 |
| Cincinnati, Ohio | 44 | 28 | 11 | 2 | 1 | 2 | 13 |
| Cleveland, Ohio | 101 | 74 | 19 | 4 | 2 | 2 | 2 |
| Columbus, Ohio | 212 | 155 | 42 | 8 | 6 | 1 | 16 |
| Dayton, Ohio | 106 | 69 | 25 | 6 | 5 | 1 | 6 |
| Detroit, Mich. | 156 | 97 | 33 | 19 | 5 | 2 | 5 |
| Evansville, Ind. | 36 | 29 | 4 | 3 | - | - | 2 |
| Fort Wayne, Ind. | 70 | 54 | 6 | 4 | 1 | 3 | 3 |
| Gary, Ind. | 7 | 4 | - | 1 | 2 | - | - |
| Grand Rapids, Mich. | 56 | 39 | 13 | 3 | - | 1 | 3 |
| Indianapolis, Ind. | 118 | 68 | 33 | 5 | 2 | 10 | - |
| Lansing, Mich. | 39 | 31 | 3 | 1 | 2 | 2 | 3 |
| Milwaukee, Wis. | 85 | 65 | 9 | 6 | 3 | 2 | 3 |
| Peoria, Ill. | 67 | 40 | 15 | 9 | 3 | - | 3 |
| Rockford, Ill. | 43 | 32 | 7 | - | 2 | 2 | 2 |
| South Bend, Ind. | 22 | 18 | 2 | 1 | 1 | - | 1 |
| Toledo, Ohio | U | U | U | U | U | U | U |
| Youngstown, Ohio | 50 | 38 | 7 | 3 | 2 | - | 2 |
| W.N. CENTRAL | 582 | 403 | 107 | 21 | 18 | 15 | 35 |
| Des Moines, Iowa | U | U | U | U | U | U | U |
| Duluth, Minn. | 17 | 12 | 5 | - | - | - | 1 |
| Kansas City, Kans. | 48 | 34 | 11 | 1 | 2 | - | 1 |
| Kansas City, Mo. | 110 | 65 | 22 | - | 2 | 3 | 2 |
| Lincoln, Nebr. | 43 | 35 | 6 | 2 | - | - | 3 |
| Minneapolis, Minn. | 104 | 72 | 18 | 6 | 3 | 5 | 3 |
| Omaha, Nebr. | U | U | U | U | U | U | U |
| St. Louis, Mo. | 80 | 53 | 15 | 4 | 6 | 2 | 6 |
| St. Paul, Minn. | 51 | 40 | 8 | - | 1 | 2 | 9 |
| Wichita, Kans. | 129 | 92 | 22 | 8 | 4 | 3 | 10 |
| S. ATLANTIC | 1,010 | 662 | 206 | 105 | 24 | 13 | 49 |
| Atlanta, Ga. | U | U | U | U | U | U | U |
| Baltimore, Md. | 168 | 96 | 44 | 22 | 3 | 3 | 8 |
| Charlotte, N.C. | 94 | 66 | 17 | 5 | 2 | 4 | 12 |
| Jacksonville, Fla. | 104 | 72 | 16 | 11 | 3 | 2 | 2 |
| Miami, Fla. | 122 | 78 | 26 | 15 | 3 | - | - |
| Norfolk, Va. | 41 | 31 | 7 | 2 | - | 1 | - |
| Richmond, Va. | 58 | 33 | 18 | 5 | 2 | - | 4 |
| Savannah, Ga. | 70 | 45 | 12 | 9 | 3 | 1 | 6 |
| St. Petersburg, Fla. | 68 | 49 | 10 | 6 | 2 | 1 | 4 |
| Tampa, Fla. | 177 | 134 | 26 | 13 | 3 | 1 | 11 |
| Washington, D.C. | 102 | 55 | 27 | 17 | 3 | - | 2 |
| Wilmington, Del. | 6 | 3 | 3 | - | - | - | - |
| E.S. CENTRAL | 1,115 | 693 | 259 | 96 | 25 | 39 | 60 |
| Birmingham, Ala. | 155 | 102 | 33 | 13 | 3 | 4 | 10 |
| Chattanooga, Tenn. | 65 | 48 | 8 | 6 | 1 | 2 | 6 |
| Knoxville, Tenn. | 92 | 67 | 13 | 9 | 2 | 1 | 4 |
| Lexington, Ky. | 65 | 32 | 19 | 7 | 3 | 4 | 3 |
| Memphis, Tenn. | 257 | 153 | 67 | 21 | 6 | 10 | 11 |
| Memphis, Tenn. | 257 | 153 | 67 | 21 | 6 | 10 | 11 |
| Mobile, Ala. | 63 | 40 | 15 | 6 | - | 2 | 2 |
| Montgomery, Ala. | 41 | 26 | 10 | 1 | 1 | 3 | 5 |
| Nashville, Tenn. | 120 | 72 | 27 | 14 | 3 | 3 | 8 |
| W.S. CENTRAL | 1,223 | 808 | 252 | 85 | 43 | 34 | 64 |
| Austin, Tex. | 71 | 46 | 10 | 6 | 5 | 3 | 3 |
| Baton Rouge, La. | 12 | 9 | 2 | - | - | 1 | - |
| Corpus Christi, Tex. | 38 | 27 | 6 | 3 | 2 | - | 2 |
| Dallas, Tex. | 147 | 91 | 38 | 11 | 4 | 3 | 3 |
| El Paso, Tex. | 117 | 94 | 17 | 3 | 2 | 1 | 4 |
| Ft. Worth, Tex. | 72 | 48 | 14 | 6 | 1 | 3 | 7 |
| Houston, Tex. | 303 | 198 | 68 | 20 | 8 | 9 | 24 |
| Little Rock, Ark. | 50 | 29 | 8 | 2 | 7 | 4 | 2 |
| New Orleans, La. | 134 | 81 | 31 | 12 | 7 | 3 | - |
| San Antonio, Tex. | 185 | 127 | 34 | 13 | 4 | 7 | 15 |
| Shreveport, La. | U | U | U | U | U | U | U |
| Tulsa, Okla. | 94 | 58 | 24 | 9 | 3 | - | 4 |
| MOUNTAIN | 859 | 566 | 170 | 78 | 23 | 22 | 73 |
| Albuquerque, N.M. | 92 | 58 | 21 | 10 | 2 | 1 | 4 |
| Boise, Idaho | 35 | 21 | 9 | 3 | 2 | - | 2 |
| Colo. Springs, Colo. | 57 | 42 | 10 | 3 | 1 | 1 | 8 |
| Denver, Colo. | 113 | 71 | 21 | 14 | 3 | 4 | 10 |
| Las Vegas, Nev. | 171 | 113 | 33 | 15 | 4 | 6 | 5 |
| Ogden, Utah | 28 | 21 | 6 | - | 1 | - | 5 |
| Phoenix, Ariz. | 148 | 98 | 31 | 11 | 4 | 4 | 14 |
| Pueblo, Colo. | 18 | 15 | 1 | 2 | - | - | 3 |
| Salt Lake City, Utah | 101 | 59 | 21 | 12 | 3 | 6 | 11 |
| Tucson, Ariz. | 96 | 68 | 17 | 8 | 3 | - | 11 |
| PACIFIC | 1,713 | 1,255 | 290 | 104 | 36 | 28 | 150 |
| Berkeley, Calif. | 17 | 12 | 2 | 2 | 1 | - | 1 |
| Fresno, Calif. | 46 | 36 | 5 | - | 3 | 2 | 10 |
| Glendale, Calif. | 28 | 23 | 4 | 1 | - | - | 4 |
| Honolulu, Hawaii | 63 | 49 | 11 | 3 | - | - | 2 |
| Long Beach, Calif. | 50 | 34 | 8 | 7 | 1 | - | 8 |
| Los Angeles, Calif. | 543 | 399 | 92 | 32 | 12 | 8 | 32 |
| Pasadena, Calif. | 23 | 23 | - | - | - | - | 5 |
| Portland, Oreg. | 69 | 43 | 14 | 9 | 1 | 2 | - |
| Sacramento, Calif. | 179 | 132 | 26 | 12 | 3 | 6 | 29 |
| San Diego, Calif. | 135 | 97 | 24 | 8 | 5 | 1 | 15 |
| San Francisco, Calif. | 107 | 75 | 20 | 10 | 2 | - | 8 |
| San Jose, Calif. | 191 | 142 | 34 | 10 | 3 | 2 | 20 |
| Santa Cruz, Calif. | 24 | 20 | 1 | 1 | - | 2 | 3 |
| Seattle, Wash. | 101 | 63 | 22 | 8 | 5 | 3 | 3 |
| Spokane, Wash. | 39 | 34 | 5 | - | - | - | 4 |
| Tacoma, Wash. | 98 | 73 | 22 | 1 | - | 2 | 6 |
| TOTAL | 10,794¶ | 7,318 | 2,123 | 813 | 286 | 234 | 639 |

U: Unavailable -: no reported cases

*Mortality data in this table are voluntarily reported from 122 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

†Pneumonia and influenza.

§Because of changes in reporting methods in this Pennsylvania city, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

¶Total includes unknown ages.

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